

Aviation News

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SEPT. 24, 1945

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Adds to Honors: T. P. Wright, Civil Aeronautics Administrator, just announced as winner of the 1945 Daniel Guggenheim Medal "for outstanding contributions to the development of civil and military aviation, and for notable achievement in assuring the success of our wartime aircraft production program."



THERE'S A NEW STANDARD IN AIR TRANSPORTATION!

Lockheed Constellation

Lockheed Aircraft Corporation, Burbank California  *Flying ahead in the course of flight*



Washington Observer



WHO WAS AHEAD?—Wright Field and Washington, which have been a little spurt on previous occasions, almost collided head-on the other day with this one: Wright Field said in part, in a release, ". . . we surpassed the Germans in the design and performance of our aircraft." From the War Department in Washington came a release which said in part "German jet planes and rocket weapons appeared in the skies more than a year before the Allies began using them . . . technically they were far ahead of any aircraft the Allies had in action for short range anti-aircraft, and they are unquestionably the fighter planes of the future."

AIRCRAFT OUTLOOK—Latest unofficial, but authoritative estimates on military aircraft production put the total for the rest of this year between 650 and 700 units and for 1946 a total of around 1,200. The 1947 unit estimate was about 1,500 airplanes. These are considerably under previous estimates and indicate a dollar volume of between \$566,000 and \$600,000. The totals do not include commercial production.

HUGHES FLYING BOAT—The question has arisen in government financial circles whether additional funds will have to be spent after the \$18,000,000 advanced to Howard Hughes for construction of his giant flying boat. Additional money may be needed to move the craft from Calver City to the harbor and also to finance the flight testing. Officials say that no specific opposition has been made thus far, but they want to see the project completed.

COMPROMISE—Overlooked in general comment on the switch to aircraft disposal methods by the Reconstruction Finance Corp. is the fact that the new policy is not a complete acceptance of aircraft dealers' original proposal. When the storm first broke last Spring, NATA and others wanted RFC to make deals on the exclusive agency. Even the new policy does not do this. Individuals may still buy direct from RFC sales centers.

SPB ADVISERS—Spart Property Board is at last moving to follow oft-repeated suggestions that it establish industry advisory committees. Membership of committees for consumers' goods is now being discussed. Nothing has yet been done in the industrial field, involving aircraft, but this phase of the program should well get underway. Committees will work with both

SPB and the disposal agencies concerned. SPB Admixture Systems delayed in giving the go-ahead for the appointments until the Attorney General gave his approval.

SURFACE CONTROL—Congressional advocates of surface carriers' entry into air transport may seek to tie their pet project to pending legislation to institute a Federal airport construction program. At the



Close-up of rocket charges carried by Lockheed P-38, latest and most efficient underground projectile carriers developed during the war.

House Rules Committee hearing that took up the Los airports bill, Rep. Carroll Reece (R-Tenn.) argued that the bill is an amendment to the Civil Aeronautics Act of 1938 and that, therefore, in the close debate general amendments to that act should be permitted. If this viewpoint were to be sustained, Reece could introduce an amendment to permit surface carriers to operate airlines—a proposal that was narrowly defeated when Reece brought it up at the end of Senate Commerce Committee hearings on the Los Angeles bill last year.

STERLING AREA—American manufacturers of aircraft equipment are concerned about the operation of British policy in the sterling area which can block the sale of American manufactured aviation goods. Many American manufactured exports which are competitive with products manufactured in the sterling area already have been blocked out. It is understood the State Department has taken the matter up with Lord Keynes and Halifax in the current discussions for a long-term loan. It is reported that we have informed the British that defense commitments to end their currency restrictions must be made if any loan is granted.

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country attain the foremost military and commercial air power. They are also now available to manufacturers in other industries whose problems are the production of heat and corrosion resistant products.



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HIGH TEMPERATURE ALLOY PRODUCTS

SOLAR AIRCRAFT COMPANY SAN DIEGO 12, CALIF. DES MOINES 5, IOWA

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Sept. 24, 1948

AIRLINE TEMPO QUICKENS

Seven Lines Ask Constellations; AA To Absorb Mid-Continent Line

Survey flights begun for three N. Atlantic routes; National, United, American plan early usage of DC-6 fleets; fast non-stop transcontinental services shaped by two carriers.

By MERLIN MICHEL

Proposal for an airline merger learned last week with disclosure of four-engine plane orders and announcement of new services to accelerate already rapid developments in current operations and future plans of the airlines.

Within the week

Seven airlines, including five U. S. flag carriers, were reported negotiating for 94 Lockheed Constellations to cost \$75,000,000, with some contracts already signed.

American Airlines announced plans to absorb Mid-Continent Airlines, a few days after American had promised that within six

months it will be providing four times as much scheduled service as at present.

Survey flights across the North Atlantic were started by the three airlines recently given new Civil Aeronautics Board certificates in that area.

National Airlines disclosed that its officers have been authorized to negotiate a \$7,500,000 contract to purchase 11 Douglas DC-6s, elongated versions of the C-54, and United Air Lines, describing their planes, said it expects to have 35 of them in service next year.

American, which already has an-

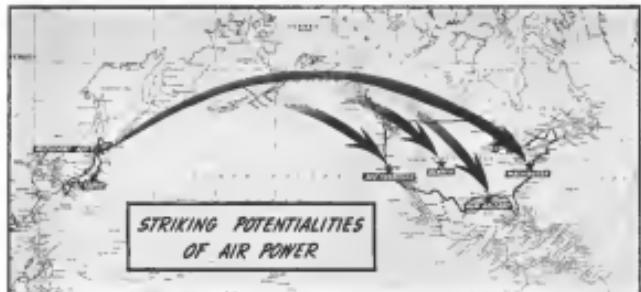
sounced orders for 50 DC-6s, first to be received next year, revealed that it expects to be using 30 C-54s from KPC surplus before the next six months have passed.

Trans World

The initials "TWA" now mean Trans World Airlines, as a result of the branching out of Transcontinental and Western Air, Inc., into international commercial air service with the start of Constellation.

A TWA spokesman said last week that the words "Trans World Airlines" would be used in reference to the airline both domestically and internationally, although the name Transcontinental or Western Air, Inc., might be used by corporate purpose. Eventually the corporate name may be shortened to "TWA, Inc."

A host of fast, non-stop service in the offing was contained in applications by both American and Northwest Airlines to consolidate



JAPAN-WASHINGTON:

Chart of the approximate routes opened last week by three B-29's in a 6,640-mile, one-stop flight from Japan. Original intention was to fly non-stop to Washington, but strong headwinds forced refueling at Chicago, after a hop of 5,000 miles in three stages from 22 to 27 hours. Commanding the three planes

were Lt. Gen. Barnes M. Giles, deputy chief of strategic air forces in the Pacific; Maj. Gen. Curtis R. LeMay, chief of staff of the strategic air forces, and Brig. Gen. Ernest O'Donnell, of the Twentieth Air Force. The chart also graphically shows where semi-air enemy forces could strike.



GLOBEMASTER IN FLIGHT:

New photo of the first test flight of Douglas' C-47 Globemaster, details of which were disclosed in the past two issues of AVIATION NEWS.

Two-segment, coast-to-coast routes so that each may compete with the through East-West routes presently operated by Transcontinental & Western Air and United, which it is all likelihood will see some nonstop transcontinental operations as soon as the Civil Aeronautics Board and acquisition of suitable equipment permit.

The Constellation

Separate airline announcements were being made on the Constellation orders. TWA, which long ago spoke for first delivery on these ships, is purchasing 34 for \$14,000,000. Pan American Airways is taking 22, including two for Panagra. Eastern Air Lines has signed for 20 and American has put in an undelivered option. Two foreign air carriers involved are KLM, Royal Dutch Airlines, which ordered four Constellations for delivery in March, and KNILM, Royal Netherlands Indies Airline, which is negotiating.

TWA expects to receive four or five in October, and 12 by the end of the year. The line gave assurance that "within the next few weeks" it will be flying Constellations coast-to-coast and across the North Atlantic.

Pan American will receive in November the first of its Constellations, for which the total contract, including Panagra, will run around \$16,000,000. PAA needs 15-hour service between New York and London, and 18 hours on the New York-California express route for which it has applied to CAB.

Pan American-Grua (Panagra) will use its two Constellations on high-speed express services between the Canal Zone and Buenos Aires, on the line's South American West Coast route. More optimistic than TWA, PAA hopes to have all 22 by the first of the year. Eastern probably will use its

value \$1,500 shares of American stock, on which market value is around \$44 per share. The merger of approved, will be the first of its kind since the Board was formed, with the exception of one in Alaska. Other deals in which one line was taken over by another have involved a purchase.

Expected Results. — The current negotiation was reported jointly by C. R. Smith, chairman of American's board, and Joseph A. Zook, Mid-Continent board chairman. Lowered operating costs, further fare reductions, and greater frequencies are anticipated results. Another will be the reduction in Mid-Continent's high per-mile figure of \$3.72 per ton mile to the 45 cents per ton mile American proposes.

New one-stop services to be inaugurated are from New York, Chicago, and Washington to Los Angeles and New York, Washington to Los Angeles, and Boston. Nonstop service will be maintained from New York and Washington to Chicago. Frequent four-engine, nonstop service between New York and Washington and New York and Boston also is contemplated.

Route Requests. — The carrier has asked CAB to consolidate into one transcontinental route AM 33 from New York and AM 4 from Los Angeles, which now terminate respectively at Fort Worth and Dallas or, on a cutoff, at Oklahoma City and Tulsa.

Douglas Cancellation

While airlines were announcing orders for Constellations, Douglas Aircraft Co disclosed cancellations amounting to more than \$44,000,000 in its commercial backlog.

When the Army cut back 7½ percent of its order for C-74s, the military version of the DC-7, President Donald Douglas explains, the company had to revise upward its cost estimate on the commercial transport. As a result, Pan American Airways will cancel a previous order for the DC-7. This will trim \$9,900,000 off a backlog estimated of Sept. 15 to be \$16,370,000.

Surchage Factor. — Additionally, the prospect of a large number of C-54s shortly becoming surplus has brought about cancellation of orders for 40 four-engine transports. That totals \$15,000,000 more from the backlog.

Partly offsetting these cuts are increases totaling \$11,500,000 in DC-6 orders.

Surplus Service Airfields Bill Asks Free Allocation To States

Proposal introduced as separate legislative measure after failure to insert it in Federal airport plan; prompt consideration promised; CAA, AAC approve principle.

A proposal that surplus Army and Navy airfields be given without cost to states and their political subdivisions has been introduced by Sen. John McMathen (D-Ga.), following his attempt to have the proposition accepted as an amendment in the Federal-aid airport bill passed by the Senate.

The principle in the proposal is known to have the approval of CAA and AAC, both having discussed with the Surplus Property Board the feasibility of grant conveyances to states in view of the ban in the Surplus Property Act on giving away government property.

PAK Cleared. — This conflict between McMathen's proposal and the act was brought up on the Senate floor by Sen. Joseph C. O'Mahoney (D-Wyo.), at the time the amendment was put forth. The amendment was withdrawn and reintroduced as a bill and referred to the Military Affairs Committee.

O'Mahoney, chairman of that group, subsequently on surpassing McMathen's bill would get prompt consideration.

While the bill would permit recognition of the airports as sell or lease surplus non-flying facilities adjacent to the landing areas, the landing spaces could not be altered so as to restrict future use. The committee would have the power to recognize the fields in time of emergency.

Another provision would permit the Federal Government to make up operating deficits on the fields for a period of five years. At the end of that time, if a field was still running at a loss, and the government declined to meet further deficits, the field would be returned to the government. Object of the section is to insure that the fields would at all times be maintained in a state of readiness for use.

Steeper Increases. — Number of passengers likely to be affected by the bill has not been determined. Medford, the Army air base there, has yet indicated how many fields will be needed in their post-war organizations, although McMathen has said he understands about 600

or 700 fields shortly will be declared surplus.

Other observers are inclined to lower his estimates considerably. As of Jan. 1, 1945, CAA listed a total of 397 fields used by the Army and Navy. Of these, the Navy owned 277 and operated under lease 94 others. The Army owned 313, and operated under lease 154. Of these, the majority are concentrated in the area from Delaware to Florida along the East Coast.

First RCAF Meteor

The first RCAF Gloster Meteor jet-powered fighter, has arrived in Canada and will be used in connection with research at the government-owned Turbo-Research, Ltd., Toronto.

The aircraft was assembled and test flown at St. Hubert airport, Montreal, and then flown the 100 miles to Ottawa in 15 minutes. Details of the aircraft are still on the British restricted list, but the time for the flight mentioned in considerably under reported Metair speed.

Air Parts Disposal Speeded By RFC

Fixed-price agreements between buyers and agency hopes to obtain volume clearance of components backlog.

In its general drive to speed surplus disposal in the next few months, Reconstruction Finance Corp. is banking heavily on the fixed-price agency agreement in the sale of aircraft components and parts.

The new agreement, first mentioned in AVIATION NEWS, Sept. 18, is one of three contained in the components disposal section of RFC's aircraft division in using. One is an experimental engineering agreement under which Ford, Barron and Dova, and other engineering firms, are seeking non-aviation use of some of the surplus

In-Trade. — The other two agreements both are designed to take advantage of in-trade distribution. The original cut-plus-free-dec arrangement is, however, being replaced, where desired, by the fixed-price agreement, which is the type the components section is concentrating upon at present.

Although the master of fixed-price agreements so far concluded is small Col. A. E. B. Peters, chief of the section, feels the method is the only one holding potentials of volume disposal. Un-

NACA Forms Industry Unit

An Industry Consulting Committee, consisting of a group of aviation manufacturers and testing companies has been established by the National Advisory Committee for Aeronautics, a move designed to assure full engagement of the nation's aeronautical research resources.

The committee, which will advise NACA as to research policy and programs, especially with regard to the needs of industry, consists of Leonard L. Boettiger, James E. Prout, Transcontinental & Western Air, Robert E. Gross, Lockheed Aircraft, H. M. Heuser, United Aircraft Corp., Steven Howard, Hawthorne School of Aeronautics, J. D. Kindelberger, North American Aviation, W. E. Morris, Pennsylvania Central Airlines, and William S. Piper, Piper Aircraft Co.

The new committee should strengthen the important relationship existing between the two agencies, and that NACA and industry cooperation has not always been as close as it should be. Members of the committee are appointed for one-year terms and the anticipated rotation of membership should insure the broadest kind of representation.

First meeting of the committee will be held at NACA's Cleveland laboratory, Sept. 30.



NEWEST NAVY FIGHTER:

Largest production will continue on the Corsair FG2, designed by Chance Vought and produced for the Navy by Goodyear Aircraft Corp. The plane has unseated for the first time last year. Powered by a Pratt & Whitney Wasp Major engine, with a military rating of 3,000 hp, which will develop 2,853 combat hp or more, the FG2 is reported to have a rate of climb half again as fast as that of the latest jet plane and is faster than the sister ship, the FG1, which set transcontinental records in 1945 and 1946, with earlier than year. The FG2 is rated at 465 mph at 15,000 feet without water injection and at 455 mph at the same height with water injection. It has a 2,500 mile range and can be used as a land-based or carrier-based plane. The new plane is equipped with a Hamilton Standard Super-hydrodynamic propeller, specially designed vertical tail surfaces including automatic auxiliary rudder, and a 37-degree bubble canopy.

der it, an agent will choose the extramural he finds he can sell, and accept them on a "consignment basis." He will deduct from his selling price 40 percent to cover his costs, and remit the balance to RFC.

Key to successful operation of this system, Col. Peterka says, is

choice of agents, and granting them complete freedom of choice. RFC will not enter into an agreement with any distributor, the latter can prove it has a successful record in handling the type of merchandise covered by the agreement. If an agent feels any particular item cannot be sold, he will not be forced to take it.

Staff Decision—Operation of the fixed-price agency agreement is being handled by the components section itself, after the RFC board of directors turned down a proposal to utilize the staff and facilities of the Marney Cook Corp. to supervise disposal under agency contracts. This organization, a non-profit liquidation group, had a successful record in disposing of surplus from the Metals Reserve Corp.

Navy Atom Planning

Adaptation of the atomic bomb to use by carrier-based airplanes is being worked out by the Navy Underwater Test Division. Gates pointed out that effective as the atomic bomb is, it is still a bomb and must be carried to the target. Gates speaking at the launching of the 45,000 ton carrier Midway,

largest, fastest craft of its kind afloat, said it took little imagination to realize the carrier's role, nor was he revealing any secrets when he said that carriers will be adapted to the new weapon.

P-V Copter Firm Gets New Support

Increased Navy awareness of the value of research and development in its post-war aviation program soon is expected to take dollars-and-cents shape in the granting of additional funds and facilities in the P-V Engineering Forum, Inc., Philadelphia, helicopter manufacturers.

Small in size and resources, the company has already developed under naval contract, a radically new helicopter prototype capable of carrying a crew of two and ten passengers. (Aviation News, July 20) and is utilizing a novel tandem rotor arrangement.

New Plane—Designated XFR-1, the aircraft is believed to be the main reason behind reported apprehensions of Navy officials that the company has the engineering ability and imagination to develop "an entirely new type of aircraft."

Just what the "new type" would be is not revealed, but it is widely recognized that the Navy is placing considerable emphasis on the use of helicopters for sea rescue work and for delivering cargo to undeveloped landing areas.

First Plane Sales Listed By ANLC

Aircraft Bureau of the office of the Army-Navy Legislation Commissioner reported sales and leases of seven overseas surplus aircraft, one glider, and parts of a plane, during the first month of its operation. Total sales amount, according to the Bureau, was \$167,329.

Two Douglas C-53 transports were sold to the China National Aviation Corp. in Calcutta, and two others leased to Danish Airlines at Cairo and Casablanca. Sales of other aircraft and aircraft parts were made in England, Colombia and India. The transport planes were allocated by the Surplus Property Board.

Dollar Basis—Thomas B. McCaughan, Army-Navy Liquidation Commissioner, said all sales were made for American dollars. The

two transports were sold for \$126,000 or about half their original cost. McCaughan pointed out that the standard price of these planes when surplus is \$90,000 "as is and where at," regardless of condition.

Two other transports leased to Danish Airlines brought \$35,000. Other purchases included an R-24-2 aircraft, located at England, by B. E. Smith in New York City for \$29,000, a TD-8 glider, by E. W. Leone, of Calcutta, for \$301; and 17-17 aircraft parts by the ARA Co. at Stuttgart for \$45,461. An additional converted C-47 transport was sold to the Cuban government for \$5,000.

All surplus transports, when declared, are allocated by the Surplus Property Board on the basis of need. A total of 267 Douglas DC-3 type transports have been allocated by SPB, of which domestic airlines received 139, the rest went to foreign airlines.

New Flag Line Bill Seeks "Showdown"

Senate aviation jurisdiction decision also sought as McCarran revises legislation strategy.

A showdown on the still unsettled issue of aviation jurisdiction in the Senate and the highly-controversial bill of a "community company" for overseas air transport operations may be forced in the near future by Nevada's Democratic Sen. Pat McCarran, the author of legislation that would create an "All American Flag Line."

McCarran's strategy for forcing the showdown on the two issues would be to introduce a "new, revised, and improved" bill creating a single company for overseas aviation, which would be so draggled and framed as to highlight the interstate commerce aspects of the measure and make the reference to Senate Interstate Commerce unavoidable.

Certain—That action would, of course, be contested by Senate Commerce Committee Chairman Sen. Joseph R. McCarthy (R-N.J.), forcing a Senate test on the aviation jurisdiction question.

McCarran, it is felt, would subsequently push for another showdown on his single instrument bill, which failed to get a favorable report from Commerce, in June, by a tie vote.

The Senator told AVIATION NEWS

T. P. Wright Gets Air Award

T. P. Wright, CAA administrator, has been awarded the Daniel Guggenheim Medal for 1948 "for outstanding contributions to the development of civil and military aircraft, and for notable achievement in assuring the success of our wartime aircraft production program."

The medal was established for the purpose of honoring persons who make notable achievements in the advancement of aeronautics. Previous for the award was made in 1930 by the gift of a fund from the Daniel Guggenheim Fund for the Promotion of Aeronautics.

Another Honor—Wright is an outstanding figure in aviation both in the United States and abroad. His work in the aircraft production program as a member of the Army Air Forces Board and as director of the Aircraft Resources Control Office contributed to his selection for the Guggenheim award. For the same achievement he received the War Department's award for civilians, the Medal for Exceptional Civilian Service.

Other factors involved in the Guggenheim Medal Award were his many technical contributions as a leading aeronautical engineer and executive, including development

that he has delayed action on the "community company" proposal because he cannot make up his mind whether to introduce a revision he has made of the legislation as a new bill for reference is indefinite or as a substitute to the Flag Line bill.

McCarran's revision of the single company bill, it is reported, makes changes in the basic construction of the proposed company which might eliminate the opposition of some Commerce committee members. **Members Needed**—Meanwhile, a drafting of that committee's measure causes a question as to which way the balance of weight would fall if and when the single instrument position is again put to a test.

Recently-appointed Sen. William F. Knowland (R-Calif.) has been selected to fill the position of the late Sen. Marinus Johnson (R-Calif.) on Commerce. Knowland is generally expected to take the same position as his successor, who on absence votes joined with the Republicans in a vote in favor of an "All American Flag Line."

Sen. Harold Burton (D-Ohio),

ment of the airplane which won the \$50,000 award in the Guggenheim Safe Aircraft Competition of 1946.

Wright, last May, delivered the Walton Wright Memorial Lecture at the invitation of the Royal Aeronautical Society. He is also known abroad for his services as technical secretary of the International Civil Aviation Conference, at Chicago, Nov. 1944 and for his participation in the U.S. Strategic Bombing Survey.

Air Parts—He is a member of the National Advisory Committee for Aeronautics and chairman of the committee on aircraft production programs as a member of the Army Air Forces Board and as director of the Aircraft Resources Control Office contributed to his selection for the Guggenheim award. For the same achievement he received the War Department's award for civilians, the Medal for Exceptional Civilian Service.

Wright was vice-president and director of engineering of the Curtiss-Wright Corp., before entering government service in 1948 when he became a member of the National Defense Advisory Commission. He continued with SPB and finally the Aircraft Production Board, prior to his appointment as administrator of civil aeronautics.

one of the two Republicans (the other Sen. Guy Cardozo of Green Bay) who opposed the McCarran community company will vacate his position on Commerce when the Senate confirms his nomination to the Supreme Court. Hartman's vacancy will not be filled. This may mean that the opposition to a "community company" has lost the decisive vote on the committee.

Munitions Board Gets Aircraft Role

Important authority has been delegated to the Army and Navy Munitions Board by the War Production Board in the assignment of preference ratings for military, naval and aircraft experiments' projects.

This means specialized munitions are obtainable materials and facilities for the aircraft industry working on experimental and developmental projects under the National Advisory Committee for Aeronautics and for special pro-



NEW BRITISH TEMPEST

Just-released picture of the Tempest II, designed by Hawker Aircraft, Ltd. Craft is powered by a Bristol Centaurus V engine of more than 2,500-hp, driving a Rotol four-bladed constant speed propeller. Span is 41-ft., length 33 ft. 8-in., height 14 ft. 6-in.; wing area 302 square feet and weight about 11,000 pounds.

C-W Conversion Shifts Announced

Airplane division at Buffalo to be closed for transfer to Columbus; new executives given new assignments.

Important moves in Curtiss-Wright conversion plants have been announced by Guy W. Vaughan, president, including the closing of its airplane division plants in Buffalo in 1937, and becoming vice-president of the corporation in 1939. He was elected to the board of directors in 1941.

Brodie S. Wright, vice-president of the corporation, in charge of the airplane division since 1940, will move from Buffalo to company's headquarters office in New York to assist in reorganization process.

James F. Raine, who joined the organization in 1938 as manager of the Washington office of the Curtiss Aircraft and Motor Co., and became vice-president of the Curtiss-Wright Corp. in 1939, general manager of the company's Buffalo plant in 1939, and general manager of the entire airplane division in July, 1940.

G. M. Williams, senior vice-president of Curtiss-Wright and executive vice-president of the Wright Aeronautical Corp., joined the organization on a war-time basis in 1940. He has been on leave of absence as president of the Russell Manufacturing Co., since December, 1940, and will return to that position in January.

H. H. Harrison, vice-president, has been given general manager of the airplane division. Harrison was borrowed from the International Harvester Corp. for the war period.

conditions, and overall economy of operation at Columbus.

Production at the Columbus plant was concentrated on the Heidkeller SR2C, the SCI Seabat, short-observation plane. The Buffalo facilities produced 15,000 P-40s as well as C-46 Commandos and miscellaneous trainers and utility planes.

Changes included:

Robert L. Earle, vice-president, has been placed in complete charge of the airplane division, as well as the properties of which it has been in general charge since 1938. He joined Curtiss-Wright in 1938, became

Wright's representative in 1938, was made assistant to the general manager of the airplane division plant in Buffalo in 1937, and became vice-president of the corporation in 1939. He was elected to the board of directors in 1941.

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AVIATION NEWS • September 26, 1945



Earle

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PRIVATE FLYING

North American Lightplane Revealed; Low Price Seen

Surprise announcement of completed mockup for four-place, low-wing monoplane brings speculation of cost below any other comparable craft; cabin may be external powerplant if plan is approved.

By SCHOLER BANGS

North American Aviation, Inc., at Los Angeles Airport, may push a four-place, low-wing monoplane into production immediately to compete in the personal aircraft market.

A wood mockup has been completed, finished ten days after work on it was started.

» Green Light. — J. B. Knudsenberger, company president, probably will carry mockup photographs and conception sketches to New York this week and on Friday (Sept. 26) ask contractors there for first post-war models to give a formal green light. What engineers would be the company's first commercial manufacturing venture.

If production is authorized, the plane may be built in undercut the selling price of any comparable personal plane now built or under development.

As indicated in *Aviation News*, July 16 and 23, the North American lightplane may be the General Motors entry into the personal plane market and also may be the first gas turbine-propelled personal plane.

» Very Secret. — Only a few North American executives and workers have seen the mockup, and its existence has not yet been reported to most of the aircraft industry. On September 3 an *Aviation News* survey of the postwar trends of West Coast manufacturers disclosed that the company had begun "an intensive lifting of several logical commercial designs."

Up to this time, Knudsenberger has been able to convince heads of other companies, competitively interested in his post-war plane, that his objective is to perpetuate North American as a military producer.

First quasi-open indication of the company's commercial ambitions was gained when Knudsenberger pre-sold before a meet-

ing which have been made during the past year.

» Color Spec. — The present mockup is known to have spacious cabin accommodations and a reinforced sliding plastic canopy entrance but little information is available concerning other features.

It is known, however, that at least one alternative design being studied by North American engineers would call for a gas turbine-prepared powerplant of much smaller size and power than are generally being considered for planes of this class.

In view of the General Motors Corp. holdings of North American stock, it would be logical also if the North American family plane offered a place for the much-discussed GM 550-hp liquid-cooled engine, which would be well-suited to a plane of this size.

» Long Planning. — Actually, North American's explosive production of a personal plane mockup—which still may be regarded as a tentative design and subject to revision—was as sudden inspiration.

For months, company engineers have been busy at Knudsenberger and his immediate administrative staff, drawing a barrage of doodle-sketches ranging from design details to overall rough drawings of lightplane and larger aircraft.

For at least three months a small group of North American marketing analysts have been busy attempting an evaluation of the coming personal aircraft market.

Although the assumption that North American wants to enter

PLANE PURCHASE PLANS BY AAF RETURNEES

OFFICERS (327,900*)	ENLISTED PERSONNEL (1,316,280)*
SRJ-40 IF CAN AND WILL BUY 120,450	CAN AND WILL BUY 91,410
IF CAN AFFORD 120,450	114,745
EVENTUALLY WILL BUY 120,450	144,595

*SERVED AIRCRAFT TEAM BOOK 1945

Statistics announced by the Civil Aeronautics Administration disclose that 37,610 Army Air Force officers and men have indicated they can and will buy personal planes. A larger group of 163,200 veterans indicated they would buy planes if they can afford them, while 242,328 veterans indicated they eventually expect to buy planes.



HIGH ALTITUDE TAKEOFF:

To demonstrate performance of the Stinson Voyager 150, in high altitude, Consolidated Vultee Aircraft Corp., recently tried out the new four-place personal plane, at Coevo, Colo., described as the highest CAA-designated airport in the United States. As the photo indicates, the plane was airborne after a short run despite the "0's" air at 10,700 ft. Service ceiling of the Voyager is 14,000 ft.

The low-price market is speculative, it will be recalled, in view of the numerous models of three and four-place personal planes already under construction to retail for four and five thousand dollars.

Lockheed Rival—If North American engineers have hit upon a small place fabrication process that will reduce materially the number going into aircraft of conventional construction the result may be a product which will compete strongly with Lockheed Aircraft Corp.'s proposed lightplane in size and price.

Arizona Air Park

Realizing the importance of an orderly and cooperative development of private flying facilities, the Tucson Chamber of Commerce will

Disaster 'Cripples' Florida Aviation

What is described as "the worst disaster" to civil aviation in the Miami, Florida, area, one that will probably set back private flying and civil aircraft operations in the area many months, was a Hurricane, the result of intense hurricane and fire damage which destroyed more than 120 private planes at Rockwood Naval Air Station.

The commandant of the station had issued the open order and general warning to all fliers to store their planes in the three large hangars at the higher-than-air station, to protect them from the beginning hurricane, and 123 civilian planes were lodged in the "airplane-prone" wooden hangars. But the wild winds and planes the hangars housed so flung, 213 more planes and 100 ground mobile vehicles.

Gas Blasts—Five of the hangars destroyed part of the hangar, crushing walls facing down huge timbers on the planes inside

sponsor Arizona's first statewide aviation conference, Nov. 18-19.

Man function of the sessions will be to gather and disseminate the latest information on air activities within the state so that leveraging and unused capacities will be avoided, making way for a concentrated development program. Pilot, operators, managers, and county officials, plus members of chamber of commerce aviation committees throughout the state, have been invited to what, it is hoped, will become a regular method of advancing aviation within the state.

Canadian Aviators Ask Medical Policy

Canadian pilots held a protest rally at Toronto recently against lack of definite declarations of policy on medical standards by the Department of Transport, Ottawa.

Some 60 pilots, including many well-known bush pilots and veterans of the First World War attended the meeting, brought along a petition to the Minister of Transport asking him to examine every six months, and now assist in electro-cardiographs of their heart condition, and meet new visual accommodation requirements reported to have been recommended to the aviation section of the Department of Transport by medical effects of the Royal Canadian Air Force.

High Standards—Some of those attending the meeting pointed out that civilian pilots must meet stiff visual standards than combat pilots of the RCAF.

At Ottawa, A. S. Graham, assistant director of civil aviation, Department of Transport, stated that reports of license cancellations by civilians pilots are exaggerated, that only a couple of permanent Toronto pilots have lost their licenses.

A committee was formed at the meeting to find out what is happening to medical aviation in Canada. On the committee are: Austin Austin Airways, Ltd., Toronto; Clare Leavens, Leavens Boys Air Service, Toronto; George A. Patafold, director of the Ontario government's Air Passenger Air Service, Sault Ste. Marie; and Air Commodore Norman Inman, recently released by the RCAF, and operator of a charter service at Toronto.

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Lightplane Power Increases Overshadow Design Changes

Possibility of accomplishing performance advantages through aerodynamic exploration and controllable props advanced as roundup shows many contenders in "family plane" market are raising engine ratings to gain desired characteristics.

By KARL HEES

Added engine power, as an answer to operational problems, has become a factor in today's lightplane design doctrine. A roundup shows at least eight contenders in the "family plane" market are planning horsepower likes for their post-war products.

All the plans definitely swing toward larger powerplants as a basic design feature, are believed slated for below—but close to—\$3,000 selling price. The final price, it is said, will represent an increase over past estimates but will provide increased speed and takeoff performance.

Power Vs. Design—Despite these performance advantages, many observers have posed the possibility that equal results could be obtained by sticking to the home-powerplants (with the exception of operation necessary) and exploring and utilizing more fully the use of improved fuselage and wing designs and controllable pitch propellers.

Many controllable propeller manufacturers, both here and abroad, have announced numer-

ous versions of their products specifically designed for use by low horsepower aircraft. Use of such props has already proved an economic way of stepping up performance on larger ships but, as far, has been but slightly applied to lightplanes.

Similarly, the application of larger powerplants to lightplanes has emphasized the fact that basic aerodynamic designs have remained in many cases largely the same as pre-war versions. The power usage has been shared as perhaps the easiest answer to meet the "selling point" performance advantages.

Stinson—For announced an increase from 125 to 150-hp. for its prewar Voyager, four-place plane. Design changes stressed by the company emphasize greater



AIRPOWER AIRPARK:

How an airport may be developed as a community center is suggested by a bulletin of the Air Power League reproduced above and showing 1. Club house, 2. Hall, 3. Parking, 4. Hangars, 5. Tennis court; 6. Playground, 7. Swimming pool, 8. Baseball diamond, 9. Football ground, 10. Scout camp, 11. Horserace track, 12. Golf course. Such a development will enable many community interests to enjoy the community center and share the cost with the private fliers, it is pointed out.



POST-WAR CHIEF

Less publicized and pictured heretofore than its Aeromac stablemate, the Champion, is the post-war version of the Chief. 1900 is parallel to the Champion on the production line. Landing gear, wings, tail surfaces and engine installation are interchangeable on the two planes, but the Chief's side-by-side seats, much more "flexible" equipment will be "slightly higher in cost" than the \$2,885 quoted for the tandem Champion.

Sign changes are less publicized.

Even pre-war, the use of enlarged powerplants rather than changed designs was typified by the Stearman Model 100 with models of the same ship being planned for 80, 115, and 180-hp engines. In this case, however, the revolutionary design of the chief is more as publication. Use of added power to compensate for added equipment, becoming more and more important as a postwar selling feature, is typified by the Douglas, span-speed plane, still almost alone in its particularly advanced field of simplified control and safety. Adjustment of 10-hp to the craft's present

war 60-hp engine will take care of a starter and generator.

As the impact of conservation and the need for speed in preparing for the hungry post-war market became, many persons in aviation believe that horsepower will necessarily become secondary to new designs as a means of improving performance, particularly as many builders approach the power limits their present models will handle.

CAA Inspection Revisions Pushed

Statistical report of steady civil flying growth spiegelsports emphasize no longer licensing foreign rated tape.

Statistics showing a steady expansion of civilian flying, reported by the CAA General Inspection Division for the year ending June 30, are being used as a springboard for a campaign within CAA to enlarge the division.

The report says that the number of student pilot certificates increased month-by-month from 1,390 issued in July, 1944, to 6,732 in June, 1945, approximately a 500 percent increase. In the same period private pilot certificates issued increased from 733 to 12,556 a month, and commercial pilot certificates jumped from 315 in July, 1944, to 8,084 in June, 1945.

Service Photo—Many of the new commercial certificates were issued to service-trained pilots, an abnormal condition resulting from the war, but which is likely to continue until most of the service

pilots who expect to continue flying obtain their commercial licenses. After this the private pilot certificates will again be in the majority.

Number of mechanics certificates issued has increased four-fold in the last year, from 70 in July, 1944, to 287 in June, 1945; the report shows. Written exams given have increased from 4,624 to 10,677, and aircraft registrations from 315 to 1,883 for the same months.

Only a small increase is reported in aircraft inspections, from 2,579 to 2,703.

Stock Shocks—The division reports that the staff of inspectors has not been increased for more than a year, which it could do little to encourage the backlog of aircraft mechanics and planes. Changes permitting qualified flight examiners, and CAA employees, to flight test private pilot applicants, have partially alleviated the condition, yet it is reported there are still thousands awaiting CAA inspection at the nation's airports.

Curtailment and elimination of some of the voluminous reports which are still required in connection with certifications, and which make up such a large part of the inspection division's duties, is being suggested in aviation circles outside CAA as a means to the increase in inspection personnel which is being advocated by the division. It is believed that elimination of additional procedures for flight examiners and issuing regulations to permit them to make more permanent private certificates would ease the situation.

Eventually it is agreed that the division may require some enlargement. But, a streamlining of forms and reports and elimination of all possible red tape is regarded as a necessary forerunner to such a move.

Canadian Flight Bans

An early end to remaining demands of student pilot certificates increased month-by-month from 1,390 issued in July, 1944, to 6,732 in June, 1945, approximately a 500 percent increase. In the same period private pilot certificates issued increased from 733 to 12,556 a month, and commercial pilot certificates jumped from 315 in July, 1944, to 8,084 in June, 1945.

Pilotlessness to fly any particular aircraft, however, is still dependent upon permission from the Minister of Transport. Night flying bans also are still in effect.

CROWD MAGNET



Photo by E. E. Young Jr., AP Wire

Men and women stop to stare at a helicopter. There is something mysterious about a machine that hovers or moves in the sky without wings or propeller. And flies forward, sideways or backward—hovers in one spot—descent or descends vertically. Linking air tived with the ground, to make flying an easy step to anywhere.

The helicopter's high crowd appeal was shown (above) a few months ago in a demonstration of the Kelllett XR-8 military model at Fairmount Park, Philadelphia, under sponsorship of the U. S. Army Air Forces.

With the ease of a thumbnail, the XR-8 flew in, high over the crowd, and landed so noiselessly in a space only 100 feet square. Then the helicopter would straighten up, buckled, swing from side to side like a pendulum, whirled, boomed. Finally it sped forward, at a fast clip that a motor car let loose on an express highway, in complete mastery of speed, height and direction.

Just what the public's keen interest in helicopters will mean in future industrial and commercial uses for this unique type of machine is more than we at Kelllett Aircraft can forecast. As the older American designers and producers of rotary-winged craft, we consider one of the helicopter's most valuable features something we did not design or make—the inherent "cowl appeal," even to a nation which accepts modern streamlined trains and 400-mile-an-hour airplanes without a second glance.

Operating details, including cost and payload, may postpone the widest practical application of the helicopter. However, specialized money-making applications seem close at hand. Kelllett Aircraft and other important organizations in the helicopter field are devoting time, money and expense to hasten the day when these craft will meet the expectations of their most loyal customer—the American public. Kelllett Aircraft Corporation, Upper Darby, Pa.

KELLETT HELICOPTERS

Lightplane Meeting Sets Varied Agendas

Widely varying lightplane technical subjects will be discussed in the two-day light aircraft meeting of the Institute of the Aeronautical Sciences at Detroit, Oct. 4 and 5. First-day papers will include "Dimensions of Design," Reading Capacity Errors in Proper Aircraft Design," by J. Mendenhall; "Design of Aircraft Seats," by G. M. Goranson & Co.; "Design Aircraft Seats," by H. T. Sager, Lear, Inc.; "Structural Failures and Defects of Light Aircraft," by Burnell L. Springer; CAA stress-fatigue seminar, "Probable Materials of Post Reconstruction Lightplanes," by F. B. Lane, Engineering & Research Corp.; "Unfiled Approaches to Private Aircraft Design," by George H. Tweney, Detroit.

Second-day papers include "Ground Vibrations of Helicopters," by M. L. Deutsch, Wright Field; "Rideability and Landing Requirements in Aircraft Undercarriages," by Reinhardt M. Baume, Consolidated-Vultee Aircraft Corp.; "Control Operations of the Swift Wing," by George Spratt, Consolidated-Vultee, and "Stabilized Design for Low-Cost Airplanes," by Alfred Marcher, president, Republic Aviation Corp.

Chairmen of the four sessions will be Prof. Arnold M. Knutson,

4,000 Swifts

Plans for production of 4,000 Swifts by the end of 1946 have been disclosed by Globe Aircraft Co., which has already issued firm purchase orders for the engines to power these planes.

The company's planning and design work has especially been on more than 50,000 inquiries which have been received during the past nine months in response to publications and advertising about the new plane's flying qualities.

Buyer Response — Another strike to planning has been the receipt of more than \$400,000 worth of purchase orders from distributor dealers and independent customers, now held by the company.

First production all-metal Swift was scheduled to be completed early this month with a line of others following it.

University of Michigan; Peter Altman, Detroit aeronautical engineer; Walter Junosza, Piper Aircraft chief engineer, and William B. Stoltz, Graham-Page Motors Corp.

Department Store Sale Set For Cab

Mandel Brothers' Chicago department store has announced placement of a new Piper Cub two-seat plane on display in the store's new airplane department. The store will accept orders for spring delivery.

Customers will be permitted to use their regular charge accounts or a deferred payment plan in making plane purchases. Purchase price for delivery at nearby Palwaukee airport is \$2,910.

Expansion Planned — While the Cub is the first plane to be displayed by Mandel, the company expects to add other types and makes of planes to its airplane display room when they become available.

With every plane purchased, the customer will receive eight years of flight instruction, to be given by Dwight Monroe, World War I flyer and former Army instructor at Palwaukee airport.

Mandel Brothers also reports it is the first department store in the United States to have filed application with the Civil Aeronautics Board to use airplanes in deferred-overset of retail purchases.

William D. Schuhmeyer Joins Gale Associates

William D. Schuhmeyer, veteran lightplane pilot and aviation writer, has joined the firm of Charles H. Gale Associates, New York, to handle public relations accounts of a few several aviation organizations.

A former editor of *Sportman Pilot* magazine, Schuhmeyer has been a frequent contributor of aviation articles to many other magazines. To accept his new assignment he is leaving the Hawthorne School of Aeronautics, Orangeburg, N. C., where he has been instructor and assistant squadron commander of American and French Army aviation cadets.

and public relations director for the Hawthorne chain of airport operations.

For five years, previously, he was associated with Piper Aircraft Corp., Lock Haven, Penna., in sales and public relations work, part of the time as sales promotion manager. Active in various private flying activities and tours under his Amherst College days, when he was the first president of the National Intercollegiate Flying Corps, Schuhmeyer now has 4,000 pilot hours.

Airport Firm, State Increase Air Roles

A state and an engineering firm last week entered strong bids for leadership in the development of passenger landing facilities for the private and commercial flier.

Linked together in their latest effort the state, Michigan, and the engineering firm, Griffiss & Valley, Inc., of Detroit, were planning expansion of the Ann Arbor airport into a Class III field capable of handling an anticipated increase of traffic from such nearby generating points as the University of Michigan. The field will also be made ready to share in funds allocated under a national airport program.

More Forward — For Griffiss & Valley the new project aimed to fit the number of airports the firm has developed, and for the state it meant another step forward in a program that has already attracted nationwide interest to its Board of Aeronautics for advice in planning similar air expansions.

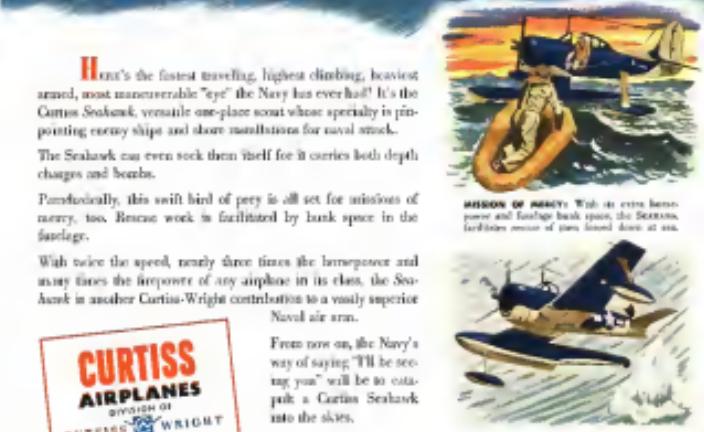
At the Ann Arbor field, space will be provided for several fixed base operators, gas clubs, feeder services and private craft hangars. Among the sources of increased traffic is an expected rise in the use of planes by persons attending summer and winter functions at the university.

Spartan Flight Boom

More than 200 residents of Spokane, Wash., now are enrolled in flying schools according to a survey of fixed base operators of the area.

Some operators have indicated their inability to handle instructional requests with their existing fleets of planes, and are looking forward to new plane deliveries expected to begin the first of next year.

CURTISS SEAHAWK



Here's the fastest traveling, highest climbing, heaviest armed, most maneuverable "eye" the Navy has ever had! It's the Curtiss Seahawk, versatile one-place scout whose specialty is pinpointing enemy ships and shore installations for naval attack.

The Seahawk can even seek them itself for it carries both depth charges and bombs.

Painfully, this swift bird of prey is all set for missions of mercy, too. Rescue work is facilitated by bank space in the fuselage.

With twice the speed, nearly three times the horsepower and many times the firepower of any airplane in its class, the Seahawk is another Curtiss-Wright contribution to a vastly superior Naval air arm.



From now on, the Navy's way of saying "I'll see you" will be to catapult a Curtiss Seahawk into the skies.

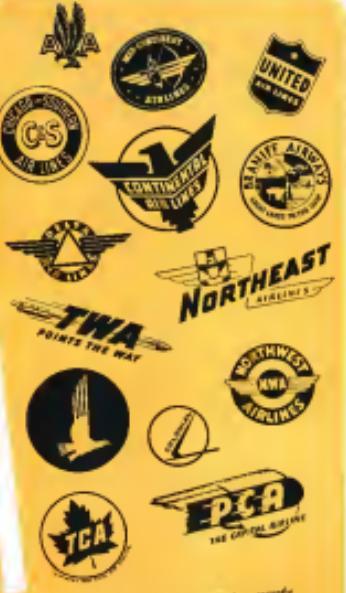
MISSION OF MERCY: Without extra horsepower and landing hook space, the Seahawk facilitates rescue of men stranded down at sea.



Now VIBRASHOCK® SERVES THE AIRLINES



The Robinson Vibroshock component (Model WSRB) was designed for the Bell 206's vibration control system. It replaces the Bell Triplex vibration absorber. These vibration absorbers are being supplied from Western Electric Company, the vibration absorber and noise reduction company. The importance of the Vibroshock cannot be overemphasized.



These 14 airlines, through Aeromaritime Realties, Inc., recently ordered a large quantity of the famous Honey ALCA vibration absorber system, complete with Robinson Vibroshock absorber positioner, which have helped to make this unit an outstanding success.

The significance of this order is that these engineers, who equip their aircraft with the most advanced vibration equipment available, are the first commercial companies to use the cost-effective proven Robinson Vibroshock absorber system to support important radio communications equipment.

Vibroshock absorbers are the only complete, fully engineered vibration-generating absorbers by 90% of vibration within the operating range of aircraft that is often required for beyond previous shock tested aircraft requirements.

Robinson engineers are available to aircraft radio and electronic instrument manufacturers and every help to solve vibration problems in connection with mechanical or electronic units requiring protection against vibration and shock.

ROBINSON AVIATION, INC.
1200 FARNUM AVENUE, NEW YORK 36, N.Y.
2127 BELMONT ROAD, BOX 2405, EDISON, N.J. 08817

Canadian Charter Rules Established

Permit for Canadian aircraft service operators who want to operate charter air services into uncharted parts of northern Canada is set for the first two licensees for such service which have been granted by the Canadian Air Transport Board.

They were issued to E. P. Fox, long known out of Edmonton as a charter operator, and to the partnership of Alphonse Duran and F. B. Wilson, who will provide charter service to prospectors, and haul freight out of Yellowknife, on Great Slave Lake.

Safety Bond—Guarantees of cause and search in case of accident or forced landing, with a minimum of \$5,000 bond to insure the performance of the guarantee, are required.

"It would be unreasonable to expose the public to the unanticipated risks of their operations without some security for rescue work including search. If the applicant's plane suffers a mishap there must be some assurance that another plane and gasoline can be provided promptly to rescue the occupants and to conduct a search for them if need be," the board ruled in the Yellowknife decision.

The Yellowknife service will operate a custom-built West with a charge of \$30 per flying hour, and is purchasing a second West for standby. Canadian Pacific Lines showed it was operating four Boeing 707 passenger planes and a Douglas A-40air on scheduled flights, with the same planes available for charter service when not on schedules.

Hitch Cost—However, evidence was given that these planes were not always available at the peak summer prospecting season, that charter rates were \$75 an hour for the Marquette and \$110 an hour for the Belanca, and that these planes were too large for a single prospector to charter, at these rates.

Fox will operate a four-place DeHavilland Dragonfly equipped with wheels and skis, and is buying another Dragonfly. Fully equipped, his service cost of Edmonton. A similar \$5,000 rescue and search bond is required for Fox, who, for three and one-half years, served as staff pilot and assistant operations manager in the British Commonwealth Air Trans-

Briefing For Private Flyers and Non-Scheduled Aviation

The tedious S-turns which the pilots of most conventional landing gear planes have had to make when taxying in order to see around their plane's blind spots may soon be dispensed with, because, as the private plane field except for back seat pilots in tandem. Tricycle landing gear planes, like the Grumman, the new Cessna, the Johnson Biplane and the Superbird, don't require the S-turn taxiing procedure and now the new Aeromac Chopper, although it has a tailwheel, provides such good visibility from the front seat, that it too makes it possible to dispense with the S-turns, except for the backseat pilot. This is not only public safety's concern. We have no choice but to compete with Piper and Taylorcraft, but when one of the big three lightweight manufacturers gets as good a selling feature as this visibility, we can't let it stand, especially before the other manufacturers fall in line. That's the reasoning behind this advance article for the S-turn. And, incidentally, somebody might get some interesting data from a time and cost study, on a plane which taxes in S-turns, as compared with one which taxes straight, if the compensation was earned over a considerable time. We believe the credit in both time and fuel saved over a year's time for the plane with better visibility should be worth having.

PRICE MARKUP—Now that the hard facts of post-war manufacturing costs are beginning to come in, a general trend toward higher personal plane prices than war quoted, the national plane survey says a year ago, is noted. However, this isn't entirely due to manufacturing cost increases. Many of the manufacturers have decided to equip their planes a little more completely for the convenience of their customers. Starters are going to be more plentiful than they were pre-war. Several of the planes carrying more than two persons will use larger engines than were originally planned, and the extra cost of these are included in the markups. But the American dream of a two-place plane for \$1,000 or less is still a long way from realization. From pieces already reported it looks as if the price floor for the two-place plane will be around \$2,000. And, if you take reports of advance orders for personal planes at their face value, it looks as if the established companies, with good dealer-distributor setups, can sell all the planes at this price they can make and more, at least for the first 2-3 years of the post-war period.

CONTINUABLE PROPSELLER—Canadian Car & Foundry Co., Ltd., Montreal, has introduced a new line of lightweight, low cost, hydraulically propellers for lightplanes in the 65- to 330-hp class. All elements of the mechanism except a cockpit central seat are contained within the propeller, and its oil supply is independent of the engine oil system. The line includes both two-position controllable, and constant speed designs, and weights are reported at 2.10/lb. pound per hp, not much in excess of fixed pitch propeller weight ratio. Blades are of laminated hardwood, plastic bonded. The company has been manufacturing these propellers under U.S. military contracts, but they are now to be made available to personal plane users.

HAKES OWN HANGAR—Difficulties in obtaining hangar for hangars, caused Berks Airport, Inc., near Reading, Pa., to buy an abandoned armory and a three-acre timber tract. The airport corporation is now cutting heavy lumber from the tract to use for uprights and studding for new hangars. The corporation already has four hangars on the field housing seven planes, including those of its own. It is on this field that 72 Reading Civil Air Patrol cadets have already selected as a result of scholarships sponsored by CAF squadrons 22. Nineteen of the cadets have formed a flying club to buy one or two planes to continue their flying.

—Alexander McBusty

ING PLANT—An observer school, at Edmonton, and a year as a pilot in the Trans-Atlantic RAF Transport Command. The losses do not permit estab-

lishment of scheduled services nor give precedence in obtaining licenses for scheduled service. Adequate passenger and aircraft insurance are required.

All of the big guns on Navy ships and a majority of their smaller guns were directed by radars designed by Bell Telephone Laboratories and made by Western Electric.



From the very beginning, almost every radar made by Western Electric played an important role in all Fleet-wide war.



What TEAMWORK did for RADAR

Bell Telephone Laboratories and Western Electric were "naturals" for the leading part they played in the radar program. For years they've worked as a team in developing and producing complex electronic equipment.

Here are some unadorned facts about what their teamwork made possible.

Up to the end of the war, Western Electric had furnished the Army, Navy and Air Forces with more than 56,000 radars of 64 different types, valued at almost \$900,000,000.

In 1944 alone, Bell Laboratories worked on 81 different types of radar systems and Western Electric produced 22,000 radars of 44 different types — of which 20 were new in production that year.

Western Electric was the largest producer of the cavity magnetron and other essential vacuum tubes for radar. Number of tubes required for Western Electric radar systems varied from less than 100 to nearly 400 per system.

Complexity of radar manufacture is indicated by the fact that even a simple type may require 4,000 labor hours to manufacture and the larger types as much as 40,000 labor hours.

This was developed and produced for strike radar "bomblights" widely used against the enemy's merchant shipping.



Search-directing radars used on 80% were designed by the Lab and made by Western Electric.



Bell Laboratories developed more than 100 different radar test sets. In 1944, Western produced over 40,000 test sets of 60 types.



A school to train military personnel to operate and maintain radar was established by the Laboratories. Over 100 courses were given to some 4,000 officers and men.



The same team is working for YOU!

The unique combination of brain power and manufacturing facilities that made Bell Laboratories and Western Electric the nation's largest source of radar, is now devoted to bringing you the best in communications equipment for a world at peace. In peacetime off-shoots of radar—and in FM, AM and television broadcasting—in radio telephone equipment for every type of mobile service—this team can be counted on to lead the way.



BELL TELEPHONE LABORATORIES
World's largest organization devoted exclusively to research and development in all phases of electrical communication.



Western Electric

Manufacturing unit of the Bell System and nation's largest producer of communications and electronic equipment.

Western Electric builds up a Field Engineering Force of more than 500 specialists. They serve with all branches of the Armed Forces on all fighting fronts.

PERSONNEL

Veteran Air Writer Joins Research Firm

George F. McLaughlin (photo), well known aviation writer for more than 30 years, has been named director of technical publications for McLaughlin-McCullum-Carr Associates, Inc., New York consulting and engineering firm. McLaughlin will remain with Aeritalia Agri, 1955, he shifted to a 16-year stint as editor of *Aero Digest*, for whom he was vice-president and technical director of Jantzen Aviation Corp., an industry which associated with Green Curtis and other early names in their public relations representation.

Cpl. Thomas C. Gentry, captain of the 40th Air Force, has been appointed for the original Flying Tigers in China, has been appointed medical director of American Airlines' Chinese Column. Gentry holds the Legion of Merit for his work in establishing emergency hospitals in China, the International Flying Circus and the Air Mail for the purpose of aiding in the evacuation of sick and wounded over the Hump into India. He succeeds Lieut. Col. Edward C. Greene, U. S. Army, retired, at American Airlines.

John D. Warren has been named to the board of directors of TACA Airways, S. A., parent company of the TACA airlines in Central and South America. Warren is a partner in G. H. Wilson and Co., investment bankers, New York. Other TACA directors are: Jack Frye, president of TWA; John M. Lockhart, Charles E. Mathews, president of Pan American World Airways; Herbert A. May, vice-president of the Union Service and Signal Co., Seminole, Penn.; Kenneth H. Murray, of the Donald M. Murray Co.; Benjamin F. Pepper, president of the Peacock Corp., Wilkes-Barre, Del., and Triumph in Dallas, Texas; M. J. Frederick M. Peyster, president of the American firm of Halligan and Co.; Walter R. Todd, chairman of the board of Todd and Brown Engineering

Corp., N. Y.; T. B. Wilson, chairman of the board of TWA, and Lowell Taves, president of TACA Airways.

Continental Cargo Task Assigned Gerald Kitchen

Gerald S. Kitchen (photo), formerly research analyst for Continental Air Lines, Inc., has been appointed to the newly-created position of manager of cargo traffic reservations for the company. In this capacity, he will be charged with the development and administration of Contracts 7's cargo and express services. Kitchen, who joined the airline in 1945 as passenger traffic agent, has been traffic dispatcher, supervisor of passenger service at Denver, and senior traffic agent.

George Branch of Aero Insurance Underwriters announces that Rich C. Lee, former underwriter, has returned and Gus A. Palmiter, former staff engineer, will rejoin the company Oct. 1. Loui qualified as an instructor at cavalry cavalry company in 1942 and has been on the remaining there until the summer of 1945 when he became a graduate instructor for Douglas Aircraft. Palmiter went to Howard Aircraft factory in a test pilot, during the war, and more recently has been given on a Navy-wide Guidance Project assigned to the Nash-Kelvinator Corp.

B. Allison Giles announced his resignation September 1, as vice-president of Ryan Aeropautical Co., Culver City, Calif., whom previously he will work for the duration only, will return to private practice as consulting engineer.

Percy Cole, formerly publicity director of Canadian Pacific Air Lines, Montreal, and recently special assistant to vice-president W. N. Neal, Canadian Pacific Railways, has been promoted publicity director for eastern Canada division of the Canadian Pacific Railways.

W. V. Hunter, widely known in the aviation field throughout the United States, has been appointed managing manager of the aviation division of Standard Oil of California, a unit of the marketing department.



Alexander M. Wright (right), manager of Chandler-Evans' Dayton plant since the start of its construction in 1945, has been named assistant general manager of operations. Floyd C. Gunderson (left), director of field and service engineering, has been appointed to the post of sales manager for Chandler-Evans.

Al W. Cassens has been made chief test pilot and flight research manager of Ryan Aeropactical Co., San Diego, Calif. Cassens, who learned to fly in Cleveland in 1933, is a veteran of flight testing with Bell Aircraft, Curtiss-Wright and Ryan.

Dr. Shaw Wen Yuan (photo), who for the past 18 months has been in charge of research and development on the Helicopter Research Division of McDonnell Aircraft Corp., St. Louis, has joined the staff of the Polytechnic Institute of Brooklyn to be research adviser for an expected new problem in the helicopter field. Dr. Yuan is the first nonresident consultant on the helicopter incorporated into the regular curriculum of an engineering institution in this country. Dr. Yuan, as consultant for the aviation industry, also is presently engaged in a study of blade angles for the 800 Aircraft Corp.

Chris M. Kee, for twelve years airway engineer for American Airlines, has joined the firm of Airways Engineering Consultants, Inc., Washington, D. C. Prior to joining American, Kee was engaged in design and analysis of aircraft and engines in Mexico, Costa Rica, Brazil and other Central and South American countries.

Frank B. Morris, for the past six years public relations manager for the aviation enterprises of Major C. G. Menley at Grand Central Airport, Glendale, Calif., has reopened his own publicity office in Los Angeles. While with Major Menley, he represented Cal-Aero Airlines, Commercial Technical Institute, Grand Central Airport Co., Polar Flight Academy, and Mira Loma Flight Academy.



THE NEW KOLLMAN FOUR-ENGINE SYNCHROSCOPE enables the pilot or flight engineer to bring all engines quickly to the same r.p.m. for the uniform power output required by economy and correct operating procedures. Designed at the request of AAF to cover military needs, these synchrosopes also have their application to transport aircraft, where they contribute to passenger comfort as well as to proper operation of the plane. The accuracy and dependability of these synchrosopes, together with their simplicity of operation, are characteristic of all Kollsman Aircraft Instruments.

KOLLMAN AIRCRAFT INSTRUMENTS

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COMMENTARY

Airborne Army Radar Aids Fit New Commercial Roles

Relatively light-weight radio or radar beacon systems for general air navigation believed answer to all-weather flying; uncanny accuracy of paratroop invasion equipment is guiding planes through zero-zero weather revealed.

Top military leaders are agreed that powerful units of airborne troops and equipment will be necessary at the start of possible future wars, or (we hope) of concerted military action to prevent such wars.

In such operations, various radar devices and electronic equipment used by the British will be indispensable. The pattern for this was set in the Normandy invasion and greatly improved in the invasion of Southern France and the dropping of an airborne army behind the enemy lines in the Nijmegen-Arnhem sector of Holland. Airborne Parachutes — Improved equipment will be available for possible military operations in the future, and will also be adaptable to commercial and non-scheduled air operations.

Types of equipment included in the complexes specified were the British navigational system known as Gee, to which the American system called Loran (Long Range

Navigational) is related, an airborne microwave search set with a PPI scope (Plan Position Indicator) which served as a radar map; small marker beacons used in conjunction with the Gee set; an absolute altimeter; and, in some ways most important of all, the Rebecons-Eureka interrogator-beacon system, largely a British development. By the use of this equipment large-scale operations were carried out in the dead of night and an angle of thick fog.

Troop Carrier Parachutes in Southern France, for example, packed up the necessary check points, accurately located the dropping zone, and dropped paratroopers through a solid blanket of ground fog, only half a minute late after a 3-hour flight. The paratroopers set up the lightweight Eureka beacons, and the bulk of the transport planes equipped with the interrogator-Rebecons, hopped on them with pin-point accuracy.

Check-Ups—Gee and the search

set were useful on the main journey for time checks, position checks and for locating the initial check points; the altimeter indicated the proper altitude for releasing the paratroopers. Rebecons-Eureka told them just when to drop. As an additional feature of the Rebecons-Eureka drop load MWG (microscopic early warning) set in England "saw" the entire operation in its scope, despite the darkness and the bad weather which developed.

It should be clearly understood that all this is not radar, although it is all electronics.

The microwave search set and the absolute altimeter are true radar in that they transmit waves of radio energy and also receive and visually record a portion of that energy which has hit an object and bounced back—a two-way trip.

Pulse Technique — Gee (and Loran) and Rebecons-Eureka operate on the principle of pulse technique. As in radar the waves of radio energy are transmitted in a highly concentrated beam—this is the "interrogation." In the navigation system the pulse is received by a surface receiver from two or more beacons, and a response is obtained, no radio "echo" is returned. In the Rebecons-Eureka and the IFF (Identification, Friend or Foe) systems the transmitted radio beam triggers a transmitter-receiver known as a transponder, which returns a "response," obviously not an echo of the original beam.

The value of such "racer" (radio or radar beacon) systems for general air navigation is obvious. There may be adaptations on the principle of D/F, whereby the ground station picks up the signal and identifies and obtains a proper response from its airborne transponder. However, there appears to be more likelihood of utilizing the Rebecons-Eureka method, in which the airborne interrogator-transponder (Rebecons) triggers the ground moon transponder (Eureka). This is IFF in reverse, and under either system range may be determined with uncanny accuracy.

Rebecons-type equipment weighs about 25 pounds, and improvements may cut even this. Relatively light weight is some excuse. With a net-work of Eureka-type racers throughout the country a tremendous boost would be given to all-weather flying.

NARRATOR



B-17 BUZZ BOMBS:

Airborne AFM experiments with launching reheat bombs included installing sweep rudders on a B-17 Flying Fortress, pictured for the first time, while making it possible for the B-29's ram jet warheads to be released in mid-air. Two rudders were attached, under the wings beyond the outboard engine, and the releases were accomplished with a standard bomb shackle. Wing rudders reduced speed of plane about 15 mph, and gross weight of the plane with bombs was approximately 30 tons.

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PRODUCTION

Plant Disposal Rule Skips Point For Aircraft, Industry Declares

Long-awaited SPB regulation considered of little benefit to plane builders without inclusion of more important, and tightly linked, policy of national air power; purchasing priority also stressed as necessary.

Instance by the Surplus Property Board of its long-awaited plant disposal regulation leaves untouched larger matters which should be determining factors in the disposal, if as felt in the aircraft industry.

Until there is decision on a national air power policy, with its subsidiary problem of dispersal, industry does not see how the plant disposal programs can be of any particular benefit to aircraft builders.

Preference Asked — Although SPB's Regulation 16, and accompanying Special Order 19, forms preference to contractors who have been operating the plants, the industry takes the attitude that in fulfilling a national air power policy, it will be necessary to give priority to the aircraft industry as an integral part of air power.

A recommendation to that effect, as well as a proposal that leases to aircraft manufacturers be based on a percentage of sales, has been sent to the Reconstruction Finance Corporation, disposal agency for surplus plants. There has been no indication of RFC's attitude.



Invincible Engines: Power plant installation in the projected Douglas DC-8 is completely enclosed within the fuselage. Twin extension shafts, each 93-ft long, connect engines and the 15-ft diameter propellers, shown in this photo, at the tail of the airplane. Advantages are aerodynamic; better streamlining, less drag.

Willow Run Bids

The ownership of the plant at Willow Run is now in the highest bidder with the relinquishment by the Ford Motor Company of its option to continue in possession of the facility. Although waiving its rights under its wartime lease to decide within 90 days whether or not it was interested in the plant, Ford reserves the right to tap any held over the next six months.

The action by Ford is easily seen as opening the way for an offer by the Kaiser-Frazer Corp., formed by Henry Kaiser and James W. Frazer, automotive manufacturer-entrepreneurs who may be said to be operating Willow Run Reconstruction Finance Corp., disposal agency for the steel, points out, however, that there have been nothing to prevent Kaiser from beginning negotiations, which at the time a recent check at RFFC, he had not done.

acting intelligently and voluntarily, would be warranted in paying off he were acquiring the property for long-term investment or for continued use. . . . Neither the original cost to the government nor the characteristics or readiness to buy of any particular prospective purchaser shall be taken into account." Also, the estimate shall be based only on such properties and equipment as would be of use to a buyer.

DC-8 Engine Plan Uses Proven Idea

Unique tail-mounted, counter-rotating props fed twin-engine power by shaft system similar to *Airacobra*.

The "bulged" engine installations in the Douglas DC-8 (Aviation News, Sept 17), while striking a completely unconventional note and arousing deep interest in manufacturing needs, utilizes a well-established technique.

The extension propeller shaft which makes possible the unique tail mounting of the two counter-rotating propellers is similar to the shafting used in the Bell Airacobras and Kingcocks during the war, as revealed by Allison Division of General Motors, makers of the shaft, and the two V-1710 engines to power the DC-1.

► Installation — Those two war-

Electro-Mechanical Actuation of Airplane Controls

Lear, Incorporated is one of the leading manufacturers of electro-mechanical control mechanisms. Its actuation and control systems have thus far served in over 700 applications on warplanes.

Leer produces parts and components which do the complete job— from converting electrical energy taken from the explosive's circuits to actual movement of controls, wrong audience, landing gear and doors. Listed here are some of the applications served by Leer equipment.



FAIRBANKS AT-21 (Overset), C.R. Paul

LEAR, Incorporated

AVIATION NEWS • September 26, 1987

plane is employed conventional tractor propulsion, with the engine mounted behind the pilot, and the shaft running under the cockpit in the nose. In the DC-3, the installation is reversed. The engines are placed forward of, and below, the passenger compartment, with two shafts passing to the rear to drive pusher propellers mounted at the tail.

Despite fears of military and civil aeronautical engineers who first examined the Autocots, that the extension shafts would frequently snap, more than 12,000 airplane wings, more than 12,000 airplane engines, and 100,000 aircraft were built without a single case of shaft failure.

In the DC-3, the extension shafts are considerably longer than those employed in Bell's fighters. In the Douglas plane, the shafts measure 68-ft., and are in several sections, with the joints supported by ball bearings. A bevel gear box, two-thirds of the distance between engine and propellers, directs the shafts upwards to the propellers which are mounted high off the ground.

New Propeller. The propellers, too, are something new. Curtiss-Wright Corp., their manufacturer, explains that while the ordinary dual propeller has two hubs and two sets of blades driven from a single power source, the installation on the DC-3 is powered from two ea-



Reveal Direct Fuel Injection: Cutaway model in larger picture illustrates inner working of the new direct fuel injection system developed for the Wright engines which power Boeing's B-29, by engineers of Bessemer Products division of Bessemer Aviation Corp. Left to right are Frank C. Mock, manager of Bessemer

Strawberg aircraft carburetor engineering sales and service; John Marshall, direct injection project engineer; and C. D. Monkart, manager of aircraft fuel equipment sales. Smaller picture shows laboratory cutaway of cylinder, the technician's hand holding the fuel spray nozzle.

Ignition Television

An apparatus which televises the location and nature of engine ignition faults without direct access to the engine has been developed by the D. Leyte Corp. and Martin Electric Co. The ignition performance is shown pictorially on a screen while the engine is running. The picture consists of two sets of projected figures, one for each spark plug, arranged in the form of a stylized figure starting from a selected cylinder. Perfect ignition gives a steady row of identical figures, but say fail in the system alters the shape of the figures. If a break in the circuit affects the current in one figure and can be identified from its position. At the rev, while a defect in the magneto or the distributor alters the shape of the whole row of figures. Intermediate failures cause the figures affected to flicker as stop with the defect.

driven by two shafts, which manage a common shaft in a gear box.

The engines are the same as those used in the Autocots, the Mustang, Lightning, Warhawk and Kiocedon. A 12-cylinder, V-type, each engine has a takeoff rating of 1,600-hp. at 3,000-rpm, at 5,000-lb. and maximum cruising horse-

power of 1,600 at 2,500-rpm, up to 18,000 ft. Alline claims the engines have the lowest weight per horsepower of any engine now in commercial transports.

Although showing only a single propeller installation, the DC-3 actually is a two-engined airplane, with single engine performance probably more satisfactory than any other. The two propellers may be feathered independently, and single engine flight may be maintained without any adjusting of control surfaces to compensate for loss of power on one side of the airplane.

Secret Fuel Spray Revealed On B-29

Bendix direct injection system shoots pressurized gas into individual cylinders; new accuracy standards developed.

Details of new fuel-delivery systems which shoot pressurized sprays of gasoline directly into the cylinders of the Wright engines powering Boeing's B-29, have just been disclosed by Bendix Aviation Corp., developers and producers of the systems.

Malcolm P. Ferguson, in announcing the heretofore secret equipment, and the "direct fuel injection" system climaxed more than 11 years of research by the corporation's engineers and intensive laboratory tests conducted in cooperation with engine manufacturers and Army and Navy engineers.

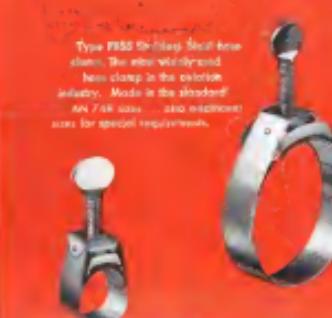
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a large air-cooled engine, combines the most efficient elements of advanced fuel and air measurement and metering with the principles of accurate, pressurized injection of fuel directly into the individual engine cylinders.

Explaining operations of the system, Frank C. Mock, director of the company's aircraft fuel equipment engineering department pointed out that large spark ignition aircraft engines had long posed a particularly difficult fuel distribution problem, that of obtaining even mixtures of fuel and air in the different cylinders. As the size of air-cooled engines was increased, new ways had to be found to deliver equal charges of fuel and air to the individual cylinders in order to ensure more stable, efficient and economical operation.

Direct fuel injection into individual cylinders is one workable solution. In the case of the B-25 engine, another immediate solution stemming from years of research was at hand, to obtain the "separate air" principle of fuel-air measurement as used in aircraft fuel-feeding equipment.

Control Plus—To achieve this master control, Bendix-Brooksburg engineers adopted for new use an direct injection the automatic metering devices already perfected and tested in widespread combat use on the company's aircraft "injection carburetor."

Mock said those fuel-air master control devices, not only meter the fuel feed according to the mass rate of engine air consumption but they also provide for automatically controlled variations of fuel air ratios as required by the demands of engine operation, including automatic mixture enrichment for high power requirements.

Working with the Air Technical Service Command and Wright Aerautical, engineers successfully blended the master control device with new and improved developments in fuel injection pumps stemming from Diesel engine principles.

The Pump—On the B-25 engine, two small compact injection pumps, each synchronized with the main engine drive shafts, accurately divide fuel into equal parts and pump it at high pressure into individual cylinders via austought stainless steel lines. Each pump contains nine finely-machined "plungers" which spray fuel into the cylinders in a series of tiny shots at the rate of one spray from

each plunger every twentieth of a second.

Fuel accurately metered by the master control is injected directly into the engine cylinders at pressures ranging from 800-lbs. to 2,300-lbs. per square inch. This tremendous increase in pressure has been made possible by the use of new steel alloys and precision machining of plungers to tolerances of ten millionths of an inch, through newly developed production and gauging techniques.

Northrop, Grumman File War Sales Data

Northrop and Grumman aircraft companies have submitted reports to the Securities and Exchange Commission listing total sales, percentage of war business represented by such sales, as well as the amount of unfilled war contracts on the books at the beginning and the end of the period covered by the report.

Grumman, reporting for the three-month period ended June

Starling Converted

The Short Starling bomber is being converted into a passenger and freight transport, powered by four Bristol Hercules XVI engines, sleeve valves, each developing 1,500-hp., driving three-blade full-shuttering deHavilland propellers.

Loaded to 30,000 pounds, it can carry a payload of 18 passengers and 2,000 pounds—empty weight 23,000 pounds, 1,300 pounds of freight and 1,000 pounds of mail, to total 1,600 pounds—a distance of 1,300 miles at a speed of approximately 300-mph., including a short stop for refueling en route and a half hour of delay.

Sent Then—Passenger seats are arranged nose-to-nose on each side of the lined and sound-proofed cabin. Immediately aft of the passenger compartment is a workshop and storage area that is galley with vacuum tanks and other kitchen equipment. Still further to the rear are two lavatories.

Boeing Terminations

The freight compartment, which has a capacity of 12,000 cubic feet in all, is Mach 1 carried in the holds cells in specially designed containers.

The plane has a span of 89-ft., one inch; in 87-ft., three inches long and 23-ft., nine inches high.

30, listed total sales of \$74,000,000 (estimated) all of which were represented by war orders. At the beginning of the period, on April 1, the company had on its books unfilled war orders totaling \$230,000,000, and on June 30 a total of \$200,000,000 worth of contracts. Northrop, reporting for the 12-month period ended July 31, reported total sales estimated at \$67,000,000, of which \$63,220,000 represented war contract sales. On Aug. 1, the company had on its books unfilled war orders amounting to \$60,500, while unfilled war orders on July 31, 1945 totaled \$112,700,000.

Nine Air Engineers Get High SAE Posts

Nine aeronautical engineers have been named to a Society of Automotive Engineers' technical board. All have working techniques to coordinate and supervisory all technical committee activities of the society.

In addition, the board will direct the development of a new cooperative engineering program designed to implement the request of Gen. Gen. Lewis H. Campbell, Chief of Ordnance, for broadening and intensifying the war-time "functional teamwork" of SAE and Ordnance engineers to retain motorized military equipment permanently.

Among those named to the board were: Gen. B. Bessell, general manager, Chance Vought division, United Aircraft; R. M. Barnet, chief engineer, Allison division, General Motors; H. D. Kelly, supervisor of development, United Air Lines; Wilson Littlewood, engineer vice-president, American Airlines; Eric Martin, engineering manager, Hamilton Standard Propeller division, United Aircraft; Arthur Hall, director of aircraft engineering, Packard Motor Car Co.; Mac Short, vice-president, Lockheed Aircraft; R. W. Young, chief engineer, Wright Aerautical, and A. T. Cowell, vice-president, Thompson Products.



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ANOTHER G-E "FIRST"

The 400 cycle a-c system, first developed by G-E with important co-operation from Sundstrand Machine Tool Company, offers a saving in weight over former systems that, alone, is highly significant. Added to this are the important advantages of having 400-cycle a-c services throughout the ship. The elimination of

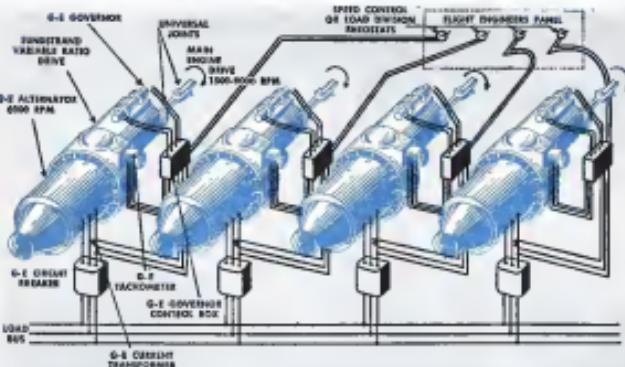
motor brushes means elimination of the problems of commutation and brush wear encountered with d-c. Maintenance is reduced and simplified. You get better, more reliable performance at high altitude.

Parallel Alternator Operation

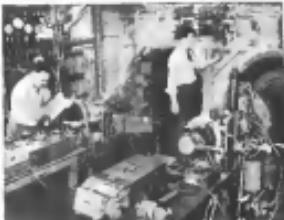
Until now, there has been no way of driving alternators from the main aircraft engines at constant frequency, and paralleling them on a common power bus. Engine horsepower on many planes may be 100 times the alternator rating. The individual engine speeds may vary over a 4 to 1 range, with very rapid acceleration. Yet the alternator on each engine must run at constant frequency, must parallel reliably, divide load equally, and maintain electrical stability despite disturbances. To do this, paralleled alternators must be driven, under all conditions, within *one mechanical degree* of perfect synchronism.

Extensive tests, under severe conditions duplicating those encountered on modern bombers, have convinced critical aircraft engineers that an airworthy solution of this tough problem has been found. The sketch at the right shows, schematically, how the new system works. *Apparatus Dept., General Electric Co., Schenectady 5, N. Y.*

TEST LABORATORY where the new G-E 300-hp, 400-cycle parallel system was proved practical. Two 40-hp alternators are driven from different aircraft engines under typical engine conditions of varying engine speeds. Rectifying electric load, and line loads, and their successful parallel operation is a credit worthy performance.



Resistors, such as voltage regulators, differential current relay, master rating relay, and variable load-shedding transducers, are provided, although not shown on this sketch.



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Great Circle Distance Basis Asked For Air Carrier Tariffs

Air Cargo, Inc. says and tariff analysis urges new computation for express and freight to avoid errors made by surface firms; permanent charge basis believed possible.

A recommendation that air carriers adopt the use of Great Circle distances as a basis for air express and air freight rates is contained in a report prepared for Air Cargo, Inc., by the American Tariff Commission.

Air carriers should strive to establish and maintain a rate structure in tariffs as simple as is compatible with a clear and precise statement of all applicable charges, and certainly should profit by and avoid the errors made by the surface carriers, the report emphasizes. In that way, the report says, less technical help will be required in the tariff departments of the carriers as well as of shippers.

No nonstop or certificated airfares from airport-to-airport are used as a basis for air express or air cargo rates, according to the report; these will be no permanent rate basis. The board would be continuing to study direct nonstop airfares, addition of new points on certificated routes, or change in airport locations, it explains.

F Milesages—Surface carriers, according to the rate survey, have spent hundreds of thousands of dollars computing mileages, some of which were incorrect before they were actually published because of abandonment of old routes or construction of new routes.

The report goes on to explain that there appears to be more logic in using rail and motor rates upon the actual distance via route of movement or via the shortest available route than on great circle distance because these modes of transport are restricted to the use of a fixed route, which in most instances is increasing whereas an airplane may use the most direct route between two points.

The simple tariffs or systems of charges used by motor carriers prior to passage of the Motor Car-

rier Act of 1935 attracted a substantial volume of traffic from the railroads, particularly from shippers whose business did not justify the maintenance of a traffic department, the report adds.

It concludes, however, no reason why adoption of simple rates and tariffs by the air carriers should not likewise help to attract business from the surface carriers.

¶ Rates Revised—The report points out, however, that following passage of the Motor Carrier Act of 1935, the motor carriers, being pressed for time to publish charges in compliance therewith, practically adopted the charges of the rail carriers. Since such charges were not designed for motor transportation, great effort has been required to revise the rates to fit the particular type of operation. The adoption of rail rates also led to the adoption of tariffs by motor carriers, which were originally rail tariffs, the report explains.

The "Final Report" on air express and air freight rates and tariffs which was prepared for Air Cargo, Inc., is of particular interest at this time since the air carriers are hopeful of building up one of the most important cargo transportation systems in America. While passenger fares have been slashed to figures well below pullman rates on many routes, little has been said in way of postwar cargo rates.

The Air Cargo expert says "It is almost axiomatic that the air carriers will have two types of service, one an express service by which packages will be transported on certificated passenger-cargo planes; and the other a cargo service by which certain goods and commodities will be transported on all-cargo planes. Such services will require two types of rates" * * * * *
¶ Urge Industry Tariffs—For the publication of these tariffs, the report recommends the adoption of



Photo: State-of-the-art

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When the pressure is low, at high altitudes, American Bosch magnetos deliver faultless performance. And Sirvene gaskets and cable boots are on the job to help maintain that dependable

service. Take the Sirvene gasket, for instance. In order to avoid the effects of reduced air density the interior of the magneto is pressurized. A positive seal is necessary around the entire distributor block and Sirvene engineers worked with American Bosch to perfect a special Sirvene formula and gasket design. A compound was developed which was soft, yet which had a good compression set, so that it gave the required positive sealing with a minimum of pressure. Another special Sirvene compound was engineered for the cable boots. In this instance, besides sealing against moisture, air and fluids, the boot serves as a solid insulation material between the cable piercing screw in the distributor and any external parts. As with all Sirvene products, extreme care is exercised in making these boots and gaskets. No flaw, however minute, is permitted, and all production procedures are executed under laboratory-type methods. All this is worth remembering when you have a problem concerning pliable parts which must operate in exceptional service conditions. You are invited to call upon Sirvene chemical engineers, whose backlog of experience and research is unsurpassed. They will be glad to help you.

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↳ Varied Interests—Among other things, the Board asserts that the Aviation Corp. is largely engaged in the manufacture of aircraft, aircraft engines, aircraft propellers and aircraft parts. Also that the Aviation Corp. is the largest stockholder in Pan American Airways Corp., holding approximately 43.22 percent of the outstanding shares.

At present, Aviation Corp. owns 267,526 shares or 22.31 percent of the outstanding common stock of American Airlines and as such is represented as the largest individual stockholder of the carrier.

While Aviation Corp. has been in the American Airline picture ever since that air carrier's inception, the 1934 act never gave a serious element until recently. The recent court action might have been held in July, 1941, when Aviation Corp. converted American Airlines debentures and received 186,789 shares of the old American \$100 par common stock. At that time, each stock represented 33.7 percent of the total. Recog-

TRANSPORT

CAB Orders Avco Inquiry To Determine AA Control

Investigation highlights 1938 ban against air carrier affiliation with non-carrier aviation interests; action is first threat to long-standing role of Aviation Corp. in American Airlines picture.

The Civil Aeronautics Board has ordered an investigation to determine whether Aviation Corp. has acquired or now holds control of American Airlines, Inc.

The corresponding inquiry reaches back to the antitrust amendment of 1934. The community of interest among aircraft manufacturers and air carriers holding mail contracts was severely criticized and served as a basis of the 1934 action. As a result, one of the main provisions written into the Civil Aeronautics Act of 1938, prohibits any air carrier to be controlled by or affiliated with "any person engaged in any phase of aeronautics other than as an air carrier."

↳ Sale Ban—This stipulation was designed primarily to preclude an aircraft manufacturer from selling equipment to an affiliated air carrier at inflated prices with the cost being borne by higher charges to the public.

It was this philosophy which, in 1934, led to the dissolution of the old United Aircraft and Transport Corp. and the formation of three separate and independent enterprises, the present United Airlines, American, and Aircraft Corp. and Boeing Airplane Co.

North American Aviation Corp., which had managed through a technology to aviation ownership of the properties now comprising Eastern Air Lines despite the 1934 action, was finally forced by the enactment of the CAA in 1938 to dispose of its air transport subsidiary.

Now comes the CAB with its order instituting an investigation to determine "whether the Aviation Corp. has acquired, and holds control of American Airlines, Inc., within the meaning of Section 404

of the Civil Aeronautics Act of 1938 . . . and if such control has been acquired . . . will it be con-

sidered, in view of the airline's participation in the national defense program. This non-voting trust arrangement, as subsequently amended, is to expire six months after the termination of the national emergency.



STRATOCRUISER MOCKUP:

Interior of the Boeing Stratocruiser as it might look in commercial transport use are shown here in these first pictures of a workshop at Boeing's Seattle plant. One is of the lounge, on the starboard lower deck, the other a view toward the rear of the main passenger

cabin, in which all seats face forward whether berthable or non-berthable. Top passenger capacity of the commercial version of the C-87 will be 214 passengers. All-cargo model would carry a 39,000-lb maximum payload.

Stock Sold—Shortly after this stock was placed in trust, Aviation Corp. sold 30,000 shares to the public. When American split its shares two for one in December, 1944, this brought Aviation Corp.'s holdings to 183,500 of the new common stock. Along with dilutions resulting from American selling additional shares to the public, Aviation Corp.'s present interest aggregates 22.25 percent of American's common stock.

None of the members of Aviation Corp.'s board sits on American Airlines' directors. But two individuals closely associated with the Aviation Corp. interests are members of American Airlines' board. Further, the chief counsel for American Airlines, Raymond Pratt, has been closely associated with Aviation Corp. from its inception to the present date.

As a matter of interest, the annual reports of American Airlines make no reference as to the trusteeship of Aviation Corp.'s stock interest. The latter's report, of course, has carefully stated the nature of this arrangement.

Concile—In addition to its investments in American and Pan American, Aviation Corp. has the controlling interest in Consolidated Valley Aircraft, a leading contractor in furnishing air transport planes. Aviation Corp. recently acquired control of Crosby Corp., manufacturer of radios and owner of a radio station.

The leading figure in Aviation Corp. is Victor Emanuel who assumed control in 1934 from E. L. Card and brought the corporation to its present position.

American Recommended For Nonstop Services

American Airlines will be authorized to serve Oklahoma, Colorado, Wyoming, Montana, City-Phoenix nonstop on AT 4 if the Civil Aeronautics Board accepts the recommendation of its examiner on the case.

In a brief report last week, Examiner James S. Keith found that the proposed nonstop operations would improve American's transcontinental traffic by making possible both time and salvage savings.

Such improvement, he said, outweighs possible injury to Transcontinental & Western Air. Since TWA will still maintain mileage advantages between major traffic centers which are competitive with American.



NEW EXAMINERS:

The Civil Aeronautics Board examiner staff, with three new lateral arrivals, was stands at 17. The new men are J. Earl Cox (left), former trial examiner with the Federal Trade Commission, and Frank Treloar, former assistant secretary of All American Airlines.

Page Wins Protection

The Civil Aeronautics Board was asked last week by Public Counsel, in its economic investigation of Page Airways, to refuse further consideration of Page's request (AVIATION NEWS, Sept. 30), for dismissal of the case which seeks to determine whether the company operated scheduled flights without proper certification.

In opposing the motion, Public Counsel charged that Page operated Roanoke-Monroe service "to a large extent for its own benefit and convenience" and might break out of Florida. Page's planes, they maintained, "were not devoted exclusively" to fulfillment of contracts with six Rochester war industries.

J. P. Reilly Opens Office

James Francis Reilly, former examiner, has moved to L. Wylie Pegue, Civil Aeronautics Board chairman, as a member of the District of Columbia Public Utilities Commission to enter private law practice in Washington, specializing in aviation work. He will be counsel for United Air Lines, among others.

From March, 1940, until September, 1943, Reilly was a trial examiner for CAB. At the latter date he became executive assistant to Pegue, a post he held until his appointment to the District PUC in July, 1944.

Tariff Discount Case Considers OPA Protest

Whether the reduced government travel discount tariff filed by Pan American Airways, Pan American-Globe Airways, Univas, Medellin and Central Airways, and Carr Meiosons do Aviation, is lawful under revised tariff rules and, at the same time, constitutes a fare increase "inconsistent with the stabilization program" will be the main issue at a Civil Aeronautics Board hearing, Sept. 28.

The board suspended the tariff and on June 25 ordered an investigation. Protests against "increases in rates," as a result of reducing the discount from 25 to 15 percent, came from the Office of Price Administration and the Central Labor Union and National Trade Council of the Panama Canal Zone.

Discount Elimination — Pan American contends that the discount reduction will not raise its rates above the stabilization base level. The proposed tariff was said to be a step toward eliminating all discounts on all systems, on which only those for Latin American service remain. Supporting evidence showing history of discount eliminations on Pan American's system fare reductions and their effect as total revenue, and loss sustained on government disbursements will be presented at the hearing.

Atlantic Air Crossing Boom Forecast By AA

Single-company air transportation of 26,000 passengers and 600 or more crossings of the Atlantic in a single month are foreseen by American Airlines on the basis of new records set in August under its Air Transport Command contract.

American believes this could be done with the same number of planes, if DC-4's were used at the same utilization ratio as flown in its trans-Atlantic operation last month for the ATC, when 27 Douglas C-46's averaged 15 hours a day per plane.

New Record—American's one-way crossings in August totaled 588, compared with a previous high of 465 in June, and its record for route miles flown was 1,926,000. American Export Airlines, part of American Airlines System, completed 150 one-way Atlantic crossings during the same month, for 502,000 miles flown.

THE COUNTERPOINT OF DEPENDABILITY IN ANY ELECTRONIC EQUIPMENT



Electronics

A SALES ADVANTAGE AT POINT OF PURCHASE

The pressure of postwar competition will force many changes in manufacturing methods. For example, the food processor who uses electric heat to sterilize packaged goods will have a potent sales advantage over the one who does not. In addition, other electronic processing methods may result in economies which will affect selling price and profits.

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Possible PAA African Service Would Use Domestic Fare Base

Line contemplates 35-hour trips to Union of South Africa at rate comparable to 4½ cents per mile, if recommended route is awarded by CAB; Constellation, DC-7's are equipment alternatives.

Thirty-five-hour air service between this country and the Union of South Africa, at rates comparable to the 4½ cents per mile on domestic lines, is contemplated by Pan American Airway if certified for the route recommended by Civil Aeronautics Board examiners in the South Atlantic case.

Two alternative plans are under consideration. If Pan American, Constellation can be obtained, the following one-way schedules would be operated:

May 16 to Nov. 15—weekly service.

Nov. 16 to Dec. 31—bi-weekly service.

Jan. 1 to Mar. 31—three times a week.

April 1 to May 15—twice a week.

PAA is now using Constellations

on its transcontinental project for the Army.

Under the second plan, using DC-7's, service would be provided twice weekly from April to December and three times a week during January, February and March.

Proposed fares, ranging from 5 to 43½ cents per passenger-mile, are based on a shading scale, with lower rate applicable to longer trips. One-way fare from New York to Johannesburg would be \$32. A berth would cost \$82 more.

Cargo rates would vary according to three classes of commodities:

Class 1, (high value), 20 to 46 cents a ton-mile.

Class 2, (low value), 15 to 35 cents a ton-mile.

ATC Sets Global Route Pattern

inauguration of the first regular round-the-world scheduled flight by the Air Transport Command, Sept. 20, will communicate the 21st anniversary, to the day, of the first globe-circling flight by Army Air Corps Capt. Eddie Rickenbacker.

First of the Douglas C-47 gliders to start the world flight will leave Washington on a route that represents a consolidation of former international ATC routes. Final changes will be made at three stops—Kearns, Manila and San Francisco.

Flight stages—Crew changes will be made at other stops along the route which goes to New York, Bermuda, the Azores, Casablanca, Tripoli, Cairo, Aden, Ceylon, Bangkok, Rangoon, Madras, Colombo, Bombay, the Marmara, Istanbul, Ankara, Tokat, Hellenic Field (Izmir), San Francisco, Kansas City and back to Washington.

Passenger mail and cargo will be carried, as proportion to War Department needs. Maximum passenger capacity will run about 22.

(The ATC also disclosed, at the same time it revealed the proposed round-the-world flight, it will begin soon a regular service between Paris and Tokyo via the U. S.

Equipment for the service will be C-47 types.

In contrast to the original AAP world flight of 26,245 miles in 1934, which required 155 days, time on the 1945 round-the-world schedule will be an estimated 131 hours (5½ days) to cover 23,147 miles.

► **Globetrotter.**—The starting plane will be christened "Globetrotter" by the wife of Lt. Gen. Harold L. George, ATC's commanding general at present headquarters of the AAF in New York. The flight, 21 years ago, was also made in Douglas planes. Four two-seater biplanes called World Cruiser—one is now in the Smithsonian Institution—started the 1934 Three Weeks flight.

Seven pilots who participated in the original flight are still serving in the AAF. They are Col. Eric Nease, Col. Lowell Smith, and Col. Leigh Wade. A fourth, Col. Lester P. Arnold, is on inactive status and is vice-president of Eastern Air Lines. Col. William G. Campbell, Arnold, with General George, will participate in the ceremonies.

On board for the first trip will be several ATC observers and an ATC public relations man.

Class 3 (little or no intrinsic value), 10 to 15 cents a ton-mile.

In their report to the board of Examiners William E. Madsen and James S. Keith narrowed the field of applicants to Pan American and American South African Line, operator since 1934 of a ship-and-airline service between the U. S., south and east Africa, and Indian Ocean islands, who proposed using the Martin Mars flying boat if granted a certificate.

The favorable consideration given the surface carrier in the final determination resulted from the examiner's finding that these two applicants stood out in their ability to develop U. S.-South African commerce, the basis for justification of the route.

► **What's in a Name?**—Designation of Pan American was "fortified" by the board's interpretation of the Civil Aeronautics Act, excluding surface carriers from airline control unless supplementary to their surface operations.

American South African Line's proposal, the examiner said, was not a service "which would be auxiliary and supplementary and therefore incidental to its steamship operations."

Other factors placing PAA "in an approximately equal position" with the steamship company as far as public interest is concerned and thereby favoring the selection were experience in a variety of world routes given by Pan American in the Pacific to the Orient and New Zealand, the North Atlantic to Europe, and to most Central and South American countries, and the "root" it has in Africa.

► **Advantages.**—Cited in the latter connection were acquisition in 1941 of operating rights in Liberia and Belgian Congo; a traffic agreement with the British airline, BEA, and Pan American's temporary certification for Minato-Leopoldville services, terminated since except for the Monroe-Leopoldville segment which is now temporarily suspended only because no aircraft is available in Pan Am to replace a plane lost in an accident.

With respect to the proposals of American Export Airlines and Pennsylvania-Central Airlines, one other operating carrier in the case, Madian and Keith apparently found little to justify recommending either for the proposed service. PAA's argument that it could provide single-carrier service to African points from the many important eastern cities it serves was



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Alchemist's dream

Alchemists of old, in long, labored attempts, tried vainly to change common ore to precious metals.

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A B.F. GOODRICH development is so important that it was kept a strict military secret until recently, can now be disclosed. It's a new kind of synthetic rubber, better for tire making than the ordinary synthetic rubber which is in general use by the tire industry.

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B.F. Goodrich is making this new rubber in plants operated for the Government. It has been used in all kinds of tires on all kinds of vehicles from passenger cars up through big bombers. Every tire containing it will stand up better under heat or constant flexing, will

wear longer, and will have increased tensile-resistance.

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not "persuasive," while Espo's experience in international operations did not fulfill the "more compelling reason" based on the route justification mentioned above.

In addition, the customers pointed out that both PAA and Export relied heavily on a New York-Puerto Rico segment as support for the African service, which might subsequently become unprofitable to Puerto Rican service. The latter is before CAR in the pending Latin American case.

Air Snapshots Allowed

Written ban on use of cameras by airplane passengers has been lifted by Civil Aeronautics Board repeat of Section 43-82 of the Civil Air Regulations.

The action, also covering search of bags and removal of cameras, was taken with the approval of the War and Navy Departments. Only remaining restrictions is against photographing military installations.

DC-6 Development Gains New Orders

National to buy 11; UAL plans ground facilities expansion to handle new ships; Pan Am completes.

With construction of the prototype of the Douglas DC-6 about two thirds completed, the four-engine, 398-mile plane was receiving increasing airline attention last week.

National Airlines announced that it was about to purchase 11 of the ships at a cost of \$7,500,000. United Air Lines, which has 15 on order, disclosed that it was under way a \$10,000,000 expansion program for airport and ground facilities to accommodate them.

Flight Data—First plane of that type is to fly shortly after the first of next year. An Army version known as the XC-112A is being constructed at Douglas' Santa Monica plant, and it is on that that

work is about two thirds finished.

Just how many DC-6's will be built, Douglas does not know. Company officials say future orders are not definite, and may not be placed until the company is in the surplus situation as it regards four-engine equipment.

United issued drawings and descriptions of the DC-6, which the line expects to have in service next year, showing that it would carry 32 passengers or more, plus 8,000 lbs. of cargo. National is announcing that its board of directors had authorized its officers to negotiate the purchase, said it expected the plane to carry 70 passengers.

► **Time Saver**—United will use the DC-6 on its coast-to-coast and Pan Pacific coast operations. They are expected to cut trans-continental travel time by 4½ hours.

The 64-ft. pressurized cabin will be divided into two sections, of which United suggests one could be used for berth arrangement and the other for day seats.

The company's expansion pro-



New Drawings of Douglas DC-6. These sketches of the Douglas DC-6, now named *Catalina*, on the West Coast, show exterior appearance, interior seating arrangement, and closeup of proposed berth ar-

rangements as pictured by United Air Lines. Upper berth (note window) will be 4-0, 7-in. long and 32-in. wide, lower berth, 6-11, 2-in. long and 41-in. wide.



Mechanix Illustrated's monthly feature, "The School Shop," gets technical about flying, and the fellows love it. In July, for instance, there's a simple, understandable explanation of the radial engine. It's Chapter 28 of "The School Shop" series, by the way — Mechanix Illustrated has been helping out a long time.



The magazine that makes plane facts exciting

Talk plain talk to America's future flyers and future plane buyers in Mechanix Illustrated, the newest magazine in the mechanical field. Here's where they look for the facts they've got to know. Mechanix Illustrated carries more aviation advertising — a look through the book will tell why. It's essentially an aviation magazine, even to the airplanes on most covers. Your future market reads it now. Reach that future market now by using Mechanix Illustrated regularly. Make it a part of your poster piece-selling plan.

gram in anticipation of acquisition of the planes, which will be applied to the DC-8 except for an extra 60 inches on length of the fuselage, estimate \$250,000 in projects now in progress and \$2,000,000 for major projects to begin 1960. The former entails revision of traffic offices and passenger deck, installation of enclosed baggage storage and cargo handling equipment and remodeling of ramp and runways. The latter will include new hangars at Chicago, Seattle and San Francisco, new traffic office and cargo terminal facilities at Los Angeles, enlargement of passenger facilities and a new flight kitchen at Portland.

Other Developments—This is the second year of the one announced for future expenditure by the company. W. A. Patterson, United president, disclosed recently that the line is ready to spend \$18,000,000 "for purchase, development and adaptation" of electronic

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Aircraft engines that have been declared surplus property by the Army, Navy and other agencies are being sold through Reconstruction Finance Corporation.

HOW TO BID—Write, wire or phone your nearest local RFC Disposing Agency for the WA LIST No. A-1, "Aircraft Engines" which gives information as to bidding method, payment procedure, description of engines, inspection of sample engines, and other pertinent data. RFC Disposing Agencies are listed below.

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RECONSTRUCTION FINANCE CORPORATION

Disposing Agencies Designated by the Service Command

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- Arizona: Phoenix
- Arkansas: Little Rock
- California: Los Angeles, Sacramento, San Francisco
- Colorado: Denver
- Connecticut: Hartford
- Florida: Miami, Tampa, West Palm Beach
- Georgia: Atlanta
- Hawaii: Honolulu
- Idaho: Boise
- Illinois: Chicago, Decatur, Elgin, Joliet, Peoria
- Indiana: Indianapolis
- Kansas: Wichita
- Louisiana: New Orleans
- Maine: Portland
- Maryland: Baltimore
- Massachusetts: Boston
- Michigan: Detroit
- Minnesota: Minneapolis, St. Paul
- Mississippi: Jackson
- Missouri: Kansas City, St. Louis
- Nevada: Las Vegas
- New Hampshire: Concord
- New Jersey: Newark
- New Mexico: Albuquerque
- New York: Albany, Buffalo, New York City
- Pennsylvania: Philadelphia, Pittsburgh
- Rhode Island: Providence
- Tennessee: Memphis, Nashville
- Vermont: Montpelier
- Virginia: Richmond
- Washington: Seattle, Spokane
- Wisconsin: Milwaukee, Madison

and other technological war-developed aids

Cargair Enterprise Swings Into Action

Now-scheduled air freight shipping agency makes first public appearance with National Skyway charter.

One of the most quietly developed enterprises in the air transport industry, Cargair, Inc., whose Los Angeles backers would like to corner non-scheduled air freight shipping, has suddenly burst upon an unsuspecting public appearance a few days ago at Fresno, Calif.

The firm contracted with National Skyway Freight Corp. for air ship from Fresno's Chandler Field to New York a consignment of 224 cases of wine, including a gift arrangement for Mayor La Guardia, and another of vase-wrapped grapes.

Space Shopping—Cargair has been shipping nationally during the past six months for exclusive franchisees which will give it space at major airports for construction of warehouses and perishable goods preceding ships.

Airport managers approached by

Cargair agents have been assured that the company stands ready to invest \$10,000,000 in perfecting its shipping agency organization. The financial sponsor of Cargair, Inc., is Lawrence Harvey, aggressive vice-president of Harvey Machine Co. of Los Angeles, who has participated in many large and successful investments in a variety of real estate and industrial enterprises.

Cargair was launched more than

a year ago with preliminary planning spearheaded by George Nashville, formerly associated with Adm. Richard Byrd. In prospect at one time, but unexecuted recently, was the marketing of a cargo loading device designed by Noville.

Service Lease—Another Cargair project has been that of leasing ground handling devices and landing crew services to major stations at terminals and airport stops points. So far, however, the airships have displayed no interest in abandoning their present operation of individual stations crews and equipment.

Over-Ocean Emergency Equipment Test

WHY THE *Martin Mars* IS TOPS AMONG TRANSPORTS!



TOP PHOTO Martin Mars has carried solid loads of over 25,000 lbs. in 4,200 miles nonstop with 15,000 lbs. of cargo... operators of the plane insist. Has cargo容積age will operate in less than 100.



TOP ROW At a 4,200-mile nonstop flight, one of these can carry 25,000 lbs. in 15 hours, including 8 ft. 7 in. cargo deck. Wingspan exceeds 200 ft.

WHY is the Martin Mars America's No. 1 transport plane? Let's look at the record! In her first 15 months of service the Mars carried 3,000,000 lbs. of cargo, nearly 3500 passengers, flew the equivalent of 10 times around the earth at the equator. During one month alone, she made 20 trips between Pearl Harbor and California for a utilization of 9.4 hours per day.



FURNISH PRODUCTION of these big flying ships, to meet Navy demands for fast transports service, places low-hanging requirements on 12 states carrying out 300 sub-contractors



LUXURIOUS LOUNGE of roomy Mars. Six air-speed seats in cabin under head! Passengers will find about, very busy trip less wear, sleep or private conversation.

NEW MARS TRANSPORTS

On the basis of the outstanding performance, the Naval Air Transport Service ordered a fleet of these highly efficient cargo carriers. Bigger, faster than the original Mars, these new transports will haul supplies to Pacific outposts at a rate of approximately 3000 miles-per-hour . . . will operate at less than 10¢ per ton-mile . . . will be quickly convertible from cargo to hospital ships accuse during 84-hour over seas and 25 overland or air transports, seating 132 passengers. These huge 62-ton flying ships will soon be entering service.

COMMERCIAL VERSIONS

Commercial versions of the new Mars, offering great freight facilities and unsurpassed luxury to accommodate transoceanic travelers, are ready to build as soon as war conditions permit. With Martin planes tested for and in quantity production of Mars flying ships, delivery of commercial models will be prompt.

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ONE WAY OF CUTTING POST-WAR OVERHEAD IN THE AVIATION INDUSTRY

As peacetime volume takes its effect in plane plants, there will be many a part and even many an assembly that will fall below an economical quantity for in-plant production. Overhead on these items will be prohibitive in a competitive economy.

Huge plants that were a necessity in war-time may soon become a burden. Investment of available capital in the purchase of DPC or other leased properties might be less productive than if such capital were used in the building of markets for sale of more planes.

Sub-contracting even more advisable in peace-time

Instead of providing plant space and overhead for the production of all formerly produced assemblies, why not make a selective study to determine which ones might be put in the hands of a reliable sub-contractor?

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for a good sub-contractor can frequently make the parts faster than your plant can make them.

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Write on your business stationery for 48-page book, "Let Lewyt Do It"—the story of the Lewyt organization in peace-time. Lewyt Corporation, 88 Broadway, Brooklyn 11, N. Y.

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BUY VICTORY BONDS

AVIATION NEWS • September 24, 1945

Non-Schedule Rules Spark State Parley

Growing interest in pending action by the Civil Aeronautics Board affecting non-scheduled air carriers was pointed up last week when the Pennsylvania Aeronautics Commission announced that airport operators in the state have been asked to meet Sept. 20 to discuss safety rules and their enforcement, and economic regulation in this field.

On the agenda are the proposed new Part 42 of the Civil Air regulations, affecting non-scheduled air carrier certification and operations, and the report by Civil Aeronautics Board Examiner William J. Madden and Curtis C. Headwaters in the Board's non-schedule investigation.

Government Delegates—Representatives are to be present at the afternoon session of the meeting, being held in the Senate caucus room of the capitol at Harrisburg, from the safety rules and economic sections of CAB and the safety regulation section of CAA.

The Commission advised the operators that the proposed regulations would have a "sweeping effect" on their businesses, and said "now is the time to act and settle yourselves."

Meanwhile, Civil Aeronautics Board sources said there was little doubt that the Board would grant requests for an oral argument on the examiner's report. Date was originally suggested for Nov. 5, but it appeared last week that the argument would be held later in that month.

Response Easier—Around 56 responses to the report have been

received by the Board, many of them coming in since the Sept. 11 deadline, but the majority of them were said to be simple requests for oral argument rather than criticisms of the examiner's findings and recommendations.

Sees Steady Drop In Air Cargo Costs

While air cargo shipping costs now are less than double ordinary freight, they will equal normal transportation costs within two years, according to Gilbert F. McKeon, vice-president of the Manhattan Storage and Warehouse Co. of New York. Expressing this belief in a recent radio talk, Mr. McKeon added that the great savings in time and materials rates made possible by air cargo are continually increasing for the higher容

"Both manufacturers and farmers are looking to sky routes to fly their products to markets and consumers," said Mr. McKeon. "Within the past few weeks we have shipped two plane loads of household furniture from New York to Los Angeles, chartering huge transport planes for the purpose. One load included enough par-

mings to equip an eight-room house. There were nearly ten tons of household goods in that plane. It took just twelve hours from Guardia Field to Los Angeles."

Mr. McKeon may be glad to conditions his customers to air-transport. Recently he had aeronautical engineers survey the roof-top of his company's plant at Third St. & 7th Ave., New York, to plan for the accommodation of helicopters so that air freight may be flown directly to nearby landing fields. Manhattan Storage has made applications to the Civil Aeronautics Board for license to operate helicopters.

Mexico Face Cut

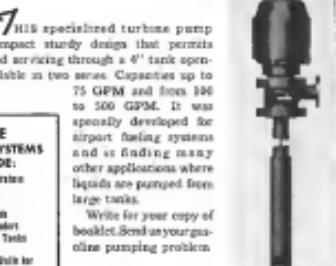
Pan American World Airways' Los Angeles-Mexico City passenger fares have been cut by 14 percent.

The fare was dropped from \$130 to \$107.46, round trip, last March, and now has been reduced to \$104.00.

Aircraft Structural Explosive

Explosives for aircraft structural demolition, made of about 30% nitro cellulose, are now available in packages of about 100 lbs. and 200 lbs. each. P.A.I. AVIATION NEWS 330 West 42nd Street, New York 18, N. Y.

ERIE Submerged TURBINE PUMP



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AVIATION NEWS • September 24, 1945

TRANSPORT — 67

Lea Airport Bill Nears Senate Floor

The \$1,300,000 Lea airport construction bill is expected to be cleared by the House Rules Committee late this week, or early next week, for floor action.

General approval of the measure was expressed by Republicans and Democratic members of the House Interstate Commerce Committee at a hearing before the rules group last week. Rep. Alfred Bulwinkle (D-N.C.) was the key witness. Republican Reps. Carl Hinshaw, Calif., and Charles Hollister, Ind., joined him in urging clearance of the bill.

The granting of a rule for consideration of the legislation, however, at best will postpone until after its clearance, and sponsor of the bill, Rep. Clinton Lea (D-Calif.) returns to Washington.

Proposers of state-federal direction of the airport program, it is understood, will make as effort to get Lea to seek Rules clearance for the Senate-passed McCarran airport bill—which decides the controversial city versus state issue in favor of the states—instead of his own. Lea is not ex-

pected to agree to that course.

However, several states proponents are prepared to offer amendments to the Lea bill when it hits the floor, switching the emphasis in the support program from city participation to state-federal control.

Priority Travel Shrinks Rapidly To Record Low

Experience of United Air Lines since priorities were cut down Sept. 15 has led Harold A. Clegg vice-president in charge of traffic, to point out that within 10 days not more than 5 percent of passenger space available will be used for priority travel.

Priorities are to be abolished Oct. 15. Revision of the system Sept. 15, telescoping the previous four classes of priority air mail, has dropped the percentage of travel of this type from 85 to less than 30 on United's system.

Cargo Factor.—A sharp reduction has occurred also in volume of priority air express, and the line's transcontinental round-trip and trans-Pacific service are carrying all offered.

Call ACTION

The Civil Aviation Agency:

• Created Alaska Airlines (September 1941) of the Civil Aviation Agency in order to consolidate all local Alaska (Unalaska and Anchorage) and Anchorage and Anchorage to Seattle services between Anchorage and Matanuska Valley, Alaska.

• Anchorage Western Airlines (September 1941) of the Civil Aviation Agency in order to consolidate Palm Springs services to San Joaquin, Palm Springs, and San Luis Obispo, Calif.

• Created Trans-Midwest Airlines (September 1941) of the Civil Aviation Agency in order to consolidate all local and several transcont. flights to Chicago, Ill., and Milwaukee, Wis., and to the cities of Cedar Rapids, Iowa, and Des Moines, Iowa, and to Indianapolis, Indianapolis, and Indianapolis, Ind.

• Created Alaska Airlines (September 1941) of the Civil Aviation Agency in order to consolidate all local and several transcont. flights to Anchorage, Alaska, and Juneau, Alaska.

OPPORTUNITY

Trans-Jet, Inc., based at the airport in New York City, is seeking to expand its operations and is looking for qualified engineers and technicians to fill positions in its design and manufacturing departments. Trans-Jet is a division of the Republic Aviation Corporation.

P-152 AVIATION NEWS
330 West 42nd Street, New York 18, N. Y.

TWA has set up United's airline station at Wichita.

Created National Federation of American Shipping companies to expand and to have full representation in American ports (Dec. 1941).

- Federal investigation of extensions of authority of Civil Aeronautics Board and Reconstruction, D. C., by another Airline, Pan American Airways, and TWA.
- Extended order of May 15, 1941, suspending temporary suspension of American Airlines and Pan Am flights to South America, and reduced limitations of the suspension.

CAB SCHEDULE

Sept. 16. Oral argument in Mountain rate case (Dec. 1941).

Sept. 16. Preliminary hearings on American Airlines application for consolidation of Seattle and Portland (Dec. 1941).

Sept. 16. Oral argument in Mountain rate case (Dec. 1941).

Sept. 16. Hearing on Mountain's application for designation as a consolidated air carrier in the Pacific Northwest (Dec. 1941).

Sept. 16. Hearings on trans-Pacific route rates (Dec. 1941).

Sept. 16. Hearing in investigation of western trans-Pacific shipping routes proposed by Pan American Airways, United, and Pan American Airlines, West Coast and central America (Dec. 1941).

Oct. 1. Exchange of exhibits in the Mountain rate case (Dec. 1941).

Oct. 1. Oral argument in Rocky Mountain rate case (Dec. 1941).

Oct. 1. Hearings in Seattle-Las Vegas route rate case (Dec. 1941).

Oct. 1. Hearings in Cincinnati-New York route rate case (Dec. 1941).

Oct. 1. Oral argument in Pacific air mail premium rate cases, 8 and 17 (Dec. 1941).

Oct. 1. Hearings on Pacific air mail premium rates and 2 (Dec. 1941).

Oct. 26. Hearings on Northeast Airports rate case (Dec. 1941).

Oct. 26. Oral argument in Corpus Christi (Dec. 1941).

Oct. 26. Oral argument in North Coast route case (Dec. 1941).

Oct. 26. Hearings in San Francisco-Woodland Valley route (Dec. 1941).

Oct. 26. Hearings in San Francisco-Oakland route (Dec. 1941).

Oct. 26. Hearings in Pacific coast (Dec. 1941).

Oct. 26. Hearings in Seattle-Las Vegas route rate case (Dec. 1941).

Oct. 26. Hearings in Northeast Airports route rate case (Dec. 1941).

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Oct. 26. Hearings in Northeast

Neglecting Local Air Services

THREE ASTONISHING ACCELERATIONS of pace were set by our U. S. flag airlines were almost daily headlines in the press. Mergers are announced and others are contemplated. Purchases of giant, long range equipment continue, with deliveries near reality. Foreign routes will be operating soon. More frequent service is proposed between our greatest cities, many schedules to be on a non-stop basis. All of this the airlines have hoped for throughout the war years.

Meanwhile, however, the established air transport industry is neglecting many local services and at least 40 communities which they once succeeded in having added to their certificates. Inauguration of service at new points is virtually unheard of. In fact, certificated airline stops are even being dropped.

While the glamour goes to the big ships, the routes across the sea, non-stop New York-Chicago and one-stop coast to coast operations, the airlines apparently fail to realize that public opinion in the grass roots is turning against them.

For example, Michigan Congressmen had a field day at the expense of PCA at a Bay City meeting recently. Results was formation of the Michigan Air Transportation Association. Rep. Fred L. Crawford, addressing 51 civic leaders and mayors of 18 Michigan cities, charged PCA's failure to reopen Detroit-St. Joe. More as "continuous stalling." He claims that "we learned PCA at no time intended to re-establish this service. It's up to us in Michigan to get needed extension of any service to our cities before the airlines and federal agencies in Washington." Rep. Roy Woodruff blamed CAB for "a complete lack of cooperation on our Michigan air transportation picture." Need of adequate North-South feeder lines to bring tourists into Michigan from Ohio, Indiana, Illinois and the rest of the Midwest was cited by Grant Arnold, transportation manager of the Detroit Board of Commerce. The new association passed a resolution protesting to CAB discontinuance of airline service without prior public hearings.

Meanwhile, in West Virginia, where airline service has been reduced to one stop, a group of prominent citizens filed an application with the Public Service Commission for an intrastate air service feeding traffic into the one remaining trunk line stop at Elkins. "Failure of trunk airlines to give adequate service" was the reason announced. Eventual expansion into other states is contemplated by the new company.

Late last week the CAB took cognizance of public opinion and as an unprecedented action ordered an investigation into the West Virginia

suspensions. PCA discontinued operations at Clarksburg and Morgantown without awaiting CAB approval. American earlier had dropped Clarksburg. TWA was notified by CAB Sept. 15 that national defense requirements no longer required delay in starting service at Morgantown but the company has given no indication of when it will include this point on AM 61. CAB's inquiry will seek to determine whether these service failures are in the public interest, or in violation of the Civil Aeronautics Act and the terms of the airlines' certificates.

This is believed to be the first such investigation by the Board. If the major trunk lines continue to show indifference to local services, the Board could well look into the surprising number of additional certificated airline stops which are not, and never have been, served by the trunk lines. An informal compilation from government records indicates that none of the certificated cities shown below were receiving certificated passenger service Aug. 15. The great majority of them have never been served, yet some were certificated by the CAB as long as 1939. These cities include:

Anderson-Muncie-Normal	Lexington, Ky.
Atlanta-Kennesaw	Marion, Fla.
Aurora City	Milwaukee, Wis.
Bethesda	Montgomery, Ala.
Beverly Hills	Massapequa, N.Y.
Bismarck-Dickinson	Marksville, Okla.
Butte	McKeesport
Canton, Mo.	Pine Bluff, Ark.
Dalton Superior	Prescott, Ariz.
Dayton	Quincy, Ill.
Des Moines	Reno, Nev.
Fresno	Ridley, Pa.
Great Rapids	Roxbury, Conn.
Grand Junction	Roxbury, Conn.
Hartford	Roxbury, Conn.
Gulfport	Saint Paul, Minn.
Holyoke, Mass.	Springfield, Mo.
Hot Springs, Ark.	Tacoma
Ida-Vermont	Toronto
Imperial, N. Y.	Tulsa
Itasca	Waukesha, Wis.
Kingsport	Wheeling
Lawrence, Kan.	White River Junction, Vt.
Lewiston, Maine	Wilmette

The Board's action in ordering an investigation into suspension and lack of service in West Virginia is in the public interest. We hope there will be other such orders if the trunk lines continue to fall down in serving the thousands of citizens they requested and received the right to serve. If they maintain this lack of interest they should hardly expect to find public opinion on their side if they seek to keep out new non-scheduled or intrastate operators who are willing to set up air service even though they lose money initially in doing so.

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